

MOTOR AGE

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MOTORING ADVENTURES IN CALIFORNIA



THROUGH A CALIFORNIA FOREST

THRILLING stories of adventures encountered in an automobile trip from Los Angeles to San Francisco are told by two Chicagoans, who took a route a little out of the ordinary and who thoroughly enjoyed roughing it through the mountains of California. M. Vehon was the host on the trip, his guest being Si Mayer, secretary of the police department of the city of Chicago. They took their outing in a 70-horsepower de Dietrich driven by Elmer Wall and in the 30 days they were away from Chicago they traveled 6,107 miles, 856 of them being in an automobile. Mr. Mayer was the historian on the trip and he tells his story as follows:

"We left Chicago March 21, and went as far as Grand Canyon, Ariz., by train. After arriving there we walked from the hotel to a place that looked like an opening. Suddenly we were looking down into space about 7,000 feet deep. The canyon is 273 miles long and about 13 miles wide. In the center is a river a mile wide, and from where we were standing it looked like a little stream and as if a number of mountains had been burned away; in fact, it was as if we were looking into Hades—all colors and shades of earth—red, blue and gray. With the sun shining

on it, it was the prettiest sight I have ever seen. From Grand Canyon we went to Los Angeles by train, having shipped the automobile from Chicago to Los Angeles. We then took in a few sights around Los Angeles that could not be reached by automobile, among them Santa Catalina islands and Mount Lowe.

"The next morning we returned to Los Angeles again and then started on our tour in the automobile. We rode over to Pasadena, from which point we intended to go to Redlands and Riverside, but only got as far as the Azusa river, where we found the bridge was down and the river so deep horses could not go through. It had rained 2 months constantly and the water came rushing down from the mountains onto these roads and where it was supposed to run into the river, it ran on the outside of the abutment, washed the abutment away and the bridge tumbled into the river, consequently we returned to Baldwin's ranch. He has 16,000 acres of land, horses and all kinds of fruit. All through this entire district are orange groves, lemon groves, grape fruit, and, in fact, everything in the fruit line. This district is positively the prettiest part of California.

"We were somewhat disappointed in California for the simple reason that whenever we heard of that state it was one large beautiful palm garden and naturally, when we got into places where the country was very rough, in fact, rougher than any we have in Illinois, and not a soul for miles and miles, we were very much disappointed. We stayed at Pasadena over night at Green's Hotel and from there we went back to Los Angeles, from which place we started on our northern tour, going by way of Hollywood, and then to Tocula, up through the San Fernando valley. There we had to climb Fremont pass, which is about 4,000 feet high. On the south side of this pass the going was very

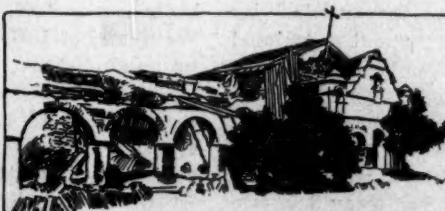


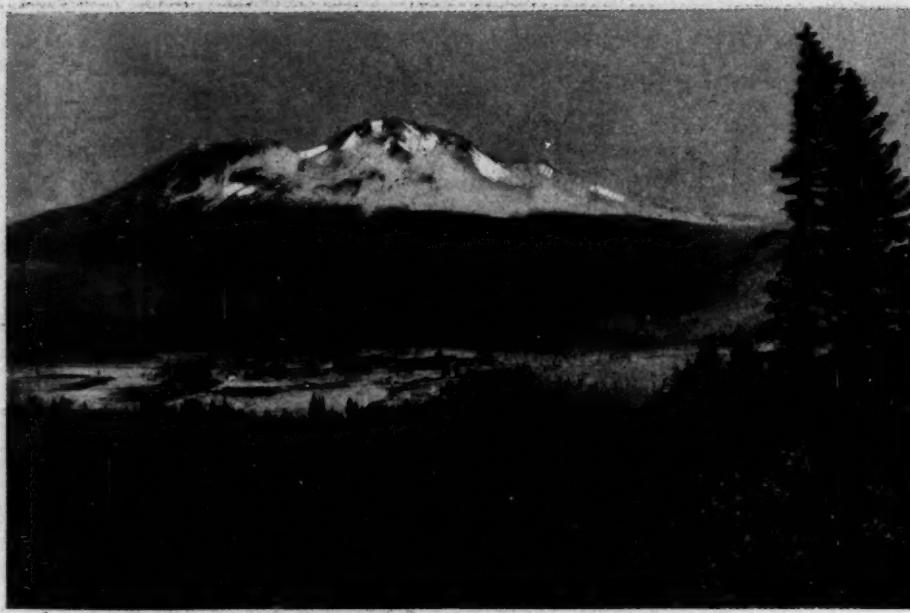
OAK-SHADED ROAD AT BURLINGAME

rough. The water had washed out part of the road and we encountered large boulders on the way up. We got within 10 feet of the top and there we stuck. I went down into the valley, about a mile and a half, and secured a man with two horses and he pulled us up. On the other side of the pass was a beautiful oiled road and we soon made up for lost time. This entire country is just loaded with oil, but notwithstanding this our gasoline cost us 30 cents a gallon. We went on to Newhall and there we met the Owl express, which is considered the fastest train in the west. At this point the road was extremely fine and we started a race with the train to Saugus, 9 miles away. We beat it by over a mile. The engineer was so surprised he stopped the train and came over to look at the de Dietrich, saying: 'Young man, do you know you have just beaten the fastest train in the west with your automobile?'

"There was no use going any further that evening, so we decided to remain at Saugus over night. We slept in the depot, which is the only building in the place. The next morning we headed for Fillmore.

We were told that we would have to cross the Piru river. When we got to the river it did not look very bad, but at that time we were novices in crossing streams and





SNOWY SUMMIT OF MOUNT SHASTA AN INSPIRING VIEW

neglected to put on our chains, consequently, when we got into the river, just about the middle, we could get no traction and there we stuck, with the machine sinking every minute, until finally the water was running over the body of the car. We worked for hours trying to get the machine out, but could not move it. We finally succeeded in getting eight horses—the first four we had could not move the machine—and after the eight horses were hooked on we had to keep swinging them from one side to the other until we finally got the machine going and succeeded in getting the front wheels out of the water about 4 feet. That was as far as they could pull it. Our chauffeur then put on the power and with the eight horses pulling and the motor humming we got the car out of the river. At that point we gave one man \$2.50, another \$2, the man with the four horses \$5 and a couple of fellows who were helping us \$1 each.

"After leaving Piru river we got to Fillmore, where we were told that a little further on it was utterly impossible to cross the road, on account of the bridge being down, and that the best thing for us to do was to put our automobile on a freight car, which we succeeded in doing. We sat in the automobile on top of the flat car and when we got to Santa Paula the freight crew stopped to take on a few more cars, so we got off to purchase some lunch. This was about 2 o'clock in the afternoon. We took the lunch back to the automobile and ate it. We passed through Ventura up to Carpenteria. By that time we were pretty well acquainted with the crew on the freight train, having handed out cigars, and made a bet we would beat them into Santa Barbara, which was 11 miles away. The conductor of the freight train said if we beat them he was willing to throw away his conductor's cap and badge. They backed

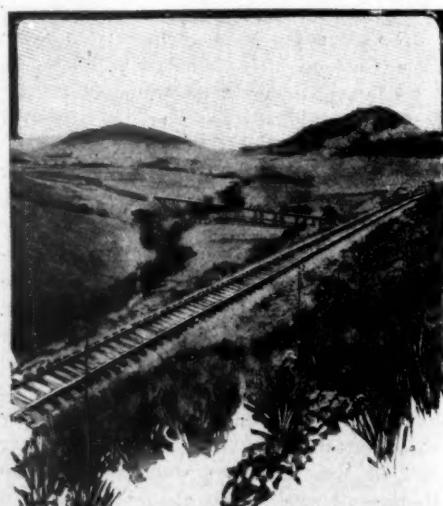
the car up to a platform and as soon as it was uncoupled we got away. It just took us 5 minutes to unfasten the ropes from the machine and get it down on the ground. By that time we could not see the freight train, but we got started on the right road and away we went, trying to beat this train into Santa Barbara. We won by about a mile.

"We left Santa Barbara that afternoon, headed for Gaviota, but on the way, while going along as nice a road as Michigan boulevard, alongside of the mountains, our machine sank from under us. It seems the water had been running down from the mountains under the road and washed everything out from under it, with the exception of the little crust on top. We sank about 6 feet into the mire. We thought it was the finish of our trip. We sent for horses, got out our shovels and we worked for about 5 or 6 hours, but could not get the machine out.

"Finally a freight engine came along and the crew gave us massive chains and heavy rope they had on the engine. We attached this to the machine and every time they pulled the big rope would tear. Then we sent for a wrecking crew along the railroad, in which there were nine Japs and a white man, the foreman. They started to dig a hole around the machine big enough to put the Masonic Temple into. They threw a lot of rocks into the opening, got their jacks and raised the car inch by inch until they finally got it high enough to put planks under it. Then the four horses pulled it back on the road. That job cost us \$29. We went just 10 feet to the north and got by in good shape, after losing 12 hours in that hole. We then went on and by the time we got to Gaviota it was 9:30 at night. It was a beautiful moonlight night and we went away up on the mountains. At this point the mountain roads were beautiful and it was a great sight look-

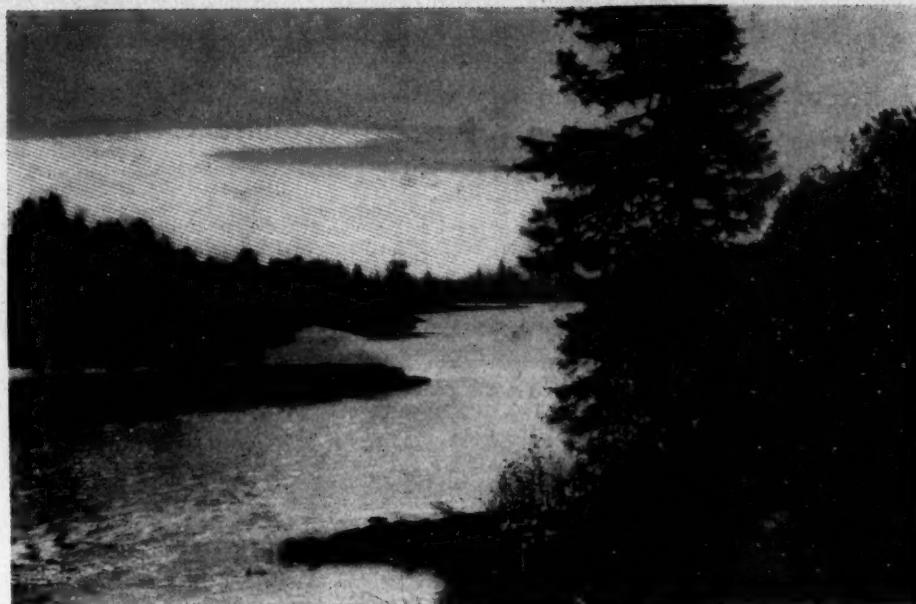
ing down into the valley upon thousands and thousands of trees, which grow about 10 to 15 feet apart, and looked as if it was an immense herd of buffalo grazing on the grass. We finally got down into the valley to a place called Los Olivos, arriving there at about 11 o'clock at night. Of course, the entire town was fast asleep, but we got to the hotel, a little bit of a shack, and wanted something to eat. The proprietor said it would be impossible to give us anything to eat, so we asked him to let us go into the kitchen and get our own supper. We had fried eggs, fried potatoes, ham sandwiches, olives and oranges, in fact, a feast fit for a king, prepared by ourselves.

"The next morning we started for Santa Maria. This is a pretty little place and the roads around it are excellent. We stayed there a little while and were told that it would be utterly impossible to get through, as the Santa Maria river had overflowed and it was $\frac{3}{4}$ mile wide, with all kinds of sand bars in the center of it. We thought we would try it, and when the people of the town heard we were going to cross the river in an automobile nearly everybody went to the river to see us. We put on our chains and made for it. We would get up to a sand bar and instead of crossing it straight we cut off in a diagonal manner. As soon as we got to the top of the bar we would rest, cut across to the next and repeat. We got all the way across the river to within 10 feet of the bank, when we threw in the high speed. The bank was about 3 feet high and we did not know it. Our front wheels hit it and almost threw us out. How we ever got to the top I cannot understand, as the bottom of the body of the car at one time was resting on the bank and the pan was broken to pieces. As luck would have it, a fellow came along with six horses, who put the animals to the machine and took us across the remaining 10 feet on to a hard road. We had to climb a few more mountains and finally landed in a place called Arroyo Grande, and a welcome place it was.



HORSESHOE CURVE NEAR SAN LUIS OBISPO

"From there we went to San Luis Obispo, where we put up the machine and had the axle straightened. We stayed there for a day. From San Luis Obispo we headed for Paso Robles, but before reaching there had to cross the Margarita river, which is about 50 feet wide and full of large boulders. It was down in a sort of a creek, consequently we had a climb of about 15 feet on the other side. We got over to within about 5 feet of the bank. We worked away there for hours, with four horses, but could not move the machine. Finally, at half past 1 o'clock in the morning, a man came along with a horse and buggy. I got into the rig and drove 7 miles to get eight big strapping horses. I had to promise the owner \$20 to come down and pull us up. We then continued on to Paso Robles, arriving there at 5 minutes to 5 in the morning, having passed through a swampy country. At San Miguel we met a cyclist and told him we were headed for San Lucas. He told us to go back about 25 miles, then were three roads and we thought we had followed his instructions. We had covered about 40 miles before we met a man who told us to go back about 25 miles, then turn to our left, where we would strike the right road. Back again we climbed over the mountains—this was about 9:30 at night—until we struck the right road, then started north again. We were not sure then we were on the right road, but kept on going, going, going, mile after at each other, then down into the valley. mile, until finally we came to building after building that had been deserted. We finally got to a place where there was really a man and we asked him if we were on the right road to San Lucas. He informed us we were 65 miles from that point and to reach it we would have to cross Peachtree mountain, which is over 5,000 feet high, and the road just about wide enough for a machine to travel on. We crossed a mountain in the dark and did not think very much of it. We kept on going until finally, about 20 miles further on, we certainly got to a peach of a moun-



WHERE THE SANTA MARIA RIVER WAS CROSSED

tain. We were about quarter way up when our clutch began to get hot and we stopped to put some rosin on it. In the meantime I had walked ahead for about an hour and a half, still I could not see the top. When I looked away down below me I saw two little lights—the machine was coming up. I yelled so they would stop and pick me up, but of course they could not hear me and the car went by me like a streak of lightning. I was so tired I could hardly move. I looked away up ahead of me and saw just the least little speck of the rear light. Of course, I kept after the machine and when I got on top of Peachtree mountain I lay on the road. I was never so tired in my life. When we got to the top we looked down. The moon was very bright at that time and we were so high we could no longer see the tops of the trees.

"I told the chauffeur to watch the odometer to see how far it was down. When we got to the bottom of that mountain we had traveled just 3 miles, so you can imagine how high that mountain is. Just before we got to the bottom we heard a roar that sounded very much like a river. Sure enough, there was the river, about 20 feet wide, and the water in it about 3½ feet deep, but good rock bottom. We crossed it all right and continued down on the other side of the river for about 500 feet, when we had to cross over again. We did this nine times, then started to climb out again and were caught in two clay holes. This all happened at midnight. We got out of that all right and then had to climb another range of mountains, though not nearly so high as those we just passed. At this time the moon was gradually going down. It began to get very misty and our lights had given out. First the moon was on our left, then it was on our right, and we did not know which way we were going. I finally began to realize we were going south again, when we should have been going north.

At this time we were positively lost, when we ran onto a native who was sleeping in a wagon with his little son. They had six horses. It relieved us quite a little to know there were horses about. We awakened the man and asked him if we were on the right road to San Lucas and how far it was. He said it was about 17 miles, but an awful tough road to travel. I asked him if it was any worse than we had been coming over and he said it was indeed. Well, we kept on going until we reached a certain sign post, then turned to our left. San Lucas was just 12 miles from this point. We got along the road about 10 miles when we found that half the road had been washed away and in the center was a great big wagon loaded with stuff stuck in the mud and abandoned. We were so fatigued we decided to put up the top and sides and sleep in the machine. This was at 4:30 in the morning. We went to sleep and at 6 o'clock we awakened. Then we found a sort of a hard road to the south of this wagon. We made for it and succeeded in getting across.

"The editor of the paper there asked where we came from and we told him we had come over Peachtree mountain. He said he would not believe it unless we proved it to him, as that was the first car that ever went over that mountain. We then told him about the man with the six horses we met and finally convinced him. We made for King City, then to Salinas, and from there to Monterey. From Monterey we went back to Salinas, up through Castroville, and then over the San Juan mountain. This is a beautiful view, looking down from the top of this mountain into the valley. From this point you can see San Francisco and all the cities between. We then came down off the mountain into Hollister, from Hollister through Gilroy, from Gilroy to San Jose, from San Jose up to Oakland, and from Oakland across on the ferry to San Francisco."



CANYON AT SANTA LUCIA

TO KEEP TAB ON GLIDDENITES

Checkers Will Note Regularity of Running of Cars Competing for Touring Trophy Two or Three Times Each Day—Committee Arranges for Accommodations

New York, June 19—Close tab will be kept on the running of the Glidden cup contestants from the time of their start in the morning to their arrival at the official garage at night. The plan is to have two or three checking stations, segregating the day's run into sections of from 25 to 35 miles each, and take the time of all contestants as they pass. Since the awarding of the prize is to be based entirely on the observance of the schedule not only at night but throughout the day, every effort will be made to secure official data of the running of the cars. Another form of checking will be secured by having a "trailer" car start last and report all lengthy stops and actual breakdowns and carry messages for assistance.

Three sets of official cars will precede the run. A courier will go 3 days ahead to mark the course with arrows and arrange for the allotment of sleeping quarters. A pilot car will start early and lay a complete trail. Then will come the cars carrying the checkers, who will be dropped off at the timing stations.

Further information is contained in the following summary of bulletins issued by the committee:

The committee and the superintendent have made arrangements by which provision has been made for a reservation of the entire transient accommodations in each place where the tour stops for the night. There is no place on the route where 400 tourists cannot be comfortably accommodated, and at several points as many as a thousand members of the party can be adequately cared for. To accomplish this result it has been necessary to arrange for the erection of tents, portable houses, etc., at two points. In Canada arrangements are being made for the chartering of a large St. Lawrence river steamer, which will accompany the tour and will be used as a floating hotel.

Regarding possible congestion on the road and the danger of unpleasant road conditions members of the party which recently surveyed the road state that from Montreal to Bretton Woods there is practically no dust on the roads on account of the prevailing heavy dews.

On account of the necessity of making the day's runs as nearly equal as possible the touring committee has decided that the first night's stop from Buffalo shall be at Auburn and the second night's stop shall be at Utica. The most elaborate preparations are being made by the city of Auburn and the Auburn Automobile Club for the entertainment of the tourists, and at Utica there will also be special festivities on their account.

Arrangements are now being made for a pathfinding car which will precede the tour by about 3 days and will thoroughly mark the entire route with arrows or other indicating signs and will also carry a transportation agent who will attend to the registration of the members of the party in each town. By these means the tourists on their arrival at each night's stop will find their rooms ready for them.

The superintendent of the tour is in receipt of numerous inquiries each day regarding the event, indicating a most widespread interest in the tour and the probabilities of a very heavy entry list.

Deals have been made by which the customs problem, sometimes a perplexing one for tourists passing from the United States to Canada and back again, will be handled directly by the committee and entirely without expense to the members of the tour. This is only one of the many details now being worked out by the committee, the strong effort being to relieve the members of the Glidden tour of petty annoyances at all points. Reservations of accommodations in hotels along the line have been made in sufficient amounts to provide comfortable quarters for all, and upon the arrival at a town each member of the large party will find his room waiting for him and in all probability his baggage in that room. In short, the tour is to be conducted in such a manner that the tourist will be at liberty to get as much fresh air and enjoyment and fun as possible and almost none of the annoyances of travel.

The entries so far received are as follows, the date of closing being July 3:

No. 1—N. H. Van Sicklen, 309 Michigan avenue, Chicago; Chicago to Bretton Woods. Will contest for the Glidden trophy. Apperson car, 40-45 horsepower. Four or five in party. Chicago Automobile Club.

No. 2—Arthur Holden, care F. B. Stearns Co., Cleveland, O.; Chicago to Bretton Woods. Will contest for Glidden trophy. Stearns car of 45 horsepower. Four or five in party.

No. 3—J. L. Petre, care F. B. Stearns Co., Cleveland, O.; Chicago to Bretton Woods. Will contest for the Glidden trophy. Stearns car of 45 horsepower. Four or five in party.

No. 4—Charles J. Glidden, Hotel Touraine, Boston, Mass.; Buffalo to Bretton Woods. Will contest for Glidden trophy. Napier car of 24 horsepower. Massachusetts Automobile Club.

No. 5—J. H. McDuffee, 1501 Michigan avenue, Chicago; Chicago to Bretton Woods. Will contest for Glidden trophy. Stoddard-Dayton car of 30-35 horsepower. Four or five in party. Chicago Automobile Club.

No. 6—Charles X. Knight, 323 Wesley avenue, Oak Park, Ill.; Chicago to Bretton Woods. Will contest for Glidden trophy. Silent Knight car of 30-40 horsepower. Four in party, including chauffeur. Illinois State Automobile Association.

No. 7—George Otis Draper, Hopedale, Mass.; Saratoga to Bretton Woods. Will not contest for Glidden trophy. Two in party.

No. 8—Ezra E. Kirk, care E. R. Thomas Motor Co., 1200 Niagara street, Buffalo, N. Y.; Buffalo to Bretton Woods. Will contest for

Glidden trophy. Thomas car of 50 horsepower. Five in party. Buffalo Automobile Club.

No. 9—George M. Davis, care E. R. Thomas Motor Co., 1200 Niagara street, Buffalo, N. Y.; Buffalo to Bretton Woods. Will contest for Glidden trophy. Thomas car of 50 horsepower. Five in party. Buffalo Automobile Club.

No. 10—C. A. Coey, 1424 Michigan avenue, Chicago, Ill.; Chicago to Bretton Woods. Will contest for Glidden trophy. Thomas car of 50 horsepower. Four in party. Chicago Automobile Club.

No. 11—George Soules, care Pope Mfg. Co., Hartford, Conn.; Buffalo to Bretton Woods. Will contest for Glidden trophy. Pope-Toledo car of 35-40 horsepower. Three in party. Automobile Club of America.

No. 12—W. C. Walker, care Pope Mfg. Co., Hartford, Conn.; Buffalo to Bretton Woods. Will contest for Glidden trophy. Pope-Hartford car of 25 horsepower. Three in party. Automobile Club of Hartford.

No. 13—Walter C. White, Cleveland Automobile Club. Eighteen horsepower White steamer. Will not compete for Glidden cup. Will act as pilot car.

No. 14—Philip T. Flinn, Pittsburg Automobile Club. Thirty-two horsepower Pine Arrow. F. T. Dunn, driver. Three in party.

No. 15—William E. Wright, Springfield, Mass., Springfield A. C., 35-40 horsepower touring car. Will carry five passengers. Buffalo to Bretton Woods. Glidden cup.

No. 16—Robert B. Crawford, New York, Automobile Club of America, 50-horsepower Stevens-Duryea touring car. Will carry five passengers. Buffalo to Bretton Woods, Glidden cup.

No. 17—H. A. Paulman, Chicago; Chicago to Buffalo; Pierce Great Arrow, 40-45 horsepower; five passengers; owner to drive. Chicago Automobile Club.

PACKARD WINS PRIZE

New York, June 19—Ten of the fifteen cars which started on Saturday in the second annual 2-days' economy run of the Long Island Automobile Club survived. The total distance covered was 171 miles and was made up of a run of 86 miles up the east bank of the Hudson river to Poughkeepsie on Saturday and a return trip of 85 miles on Sunday by way of Newburg and Tuxedo, the river being crossed at Fishkill Landing. Brooklyn was reached via the Jersey City annex boat. Both stages of the journey presented strenuous conditions. It rained all Saturday and on Sunday the roads were also deep with mud.

The first car to reach the home garage was a 40-45-horsepower Great Arrow, owned by J. E. Bristol, which arrived at 6:45 p. m. He was followed 10 minutes later by another Pierce of the same model and power. Next came S. H. Burns in a 24-horsepower Packard. The first prize, a silver loving cup, donated by C. B. Parker, winner of last year's contest, was awarded to Mr. Burns, whose per capita record was 89 cents.

Three cars beat this record, but were disqualified for the following reasons: J. E. Bristol's 40-45-horsepower Pierce, with a record of 81½ cents, because he did not drive his car, owing to an injured wrist; Dr. William Butler's 24-horsepower Frayer-Miller, with a score of 86 cents, because the owner did not drive and a punctured tire was not mended or replaced, though charged on the expense bill; and W. T. Wentringham's 20-horsepower Stevens-Duryea, with a record of 81 cents, because a broken spring was not replaced.

The second prize went to Alfred Wilmarth and his 40-horsepower Royal Tour-

ist, with a per capita cost of \$1.13. The Bristol Packard made the initial run of 86 miles in 4 hours 45 minutes' actual running time and the return journey in 5 hours 40 minutes. The Butler Frayer-Miller, which won the second prize in the recent 2-gallon test of the Automobile Club of America, went to Poughkeepsie on only 5 gallons of gasoline, and used but 4½ gallons coming home. It was unfortunate enough to have two punctures.

The official report follows:

Pierce Arrow, 40-45 horsepower; J. E. Bristol, six passengers; Brooklyn to Poughkeepsie; 8 gallons gasoline, \$2; Poughkeepsie to Brooklyn, 8 gallons gasoline, \$2; 1 pint oil, 8c; total, \$2.08; grand total, \$4.08; per capita cost, \$1.33. Disqualified because owner did not drive.

Packard, 24-horsepower; S. H. Burns, 5 passengers; Brooklyn to Poughkeepsie, 8 gallons gasoline, \$2; Poughkeepsie to Brooklyn, 8 gallons gasoline, \$2; 3 quarts oil, 46c; total, \$2.45; grand total, \$4.45; per capita cost, 89c. Winner of first prize, offered by Dr. C. B. Parker.

Frayer-Miller, 24-horsepower; Dr. William Butler, five passengers; Brooklyn to Poughkeepsie, 5 gallons of gasoline, \$1.25; work on motor, 15c; total, \$1.40; Poughkeepsie to Brooklyn, 4½ gallons gasoline, \$1.18; 1 pint oil, 7½c; two punctures and time, \$1.80; total, \$3.05½; grand total, \$4.45½; per capita cost, 86c. Flat tire not replaced, although charged in expense account. Disqualified because owner did not drive.

Royal Tourist, 40-horsepower; Alfred Wilmuth, five passengers; Brooklyn to Poughkeepsie, 10 gallons gasoline, \$2.50; Poughkeepsie to Brooklyn, 12 gallons gasoline, \$3; 1 quart oil, 15 cents; grand total, \$5.65; per capita cost, \$1.13. Winner second prize.

Autocar, 24-horsepower; E. W. Messereau, five passengers; Brooklyn to Poughkeepsie, 8 gallons gasoline; puncture and time, \$1.50; oil, 25 cents; total, \$3.75; Poughkeepsie to Brooklyn, 7½ gallons gasoline, \$1.87; 1 quart oil, 15 cents; grand total, \$5.77; per capita cost \$1.15.

Pierce Arrow, 30-horsepower; F. Lampe, five passengers; Brooklyn to Poughkeepsie, 11 gallons gasoline, \$2.75; repairs, 60 cents; total, \$3.35; Poughkeepsie to Brooklyn, 10 gallons gasoline, \$2.50; 1 quart oil, 15 cents; total, \$2.65; grand total, \$6; per capita cost, \$1.20.

Locomobile, 15-20-horsepower; V. F. Parker, three passengers; Brooklyn to Poughkeepsie, 5 gallons gasoline, \$1.25; Poughkeepsie to Brooklyn, 10 gallons gasoline, \$2.50; 3½ pints oil, 25 cents; total, \$2.75; grand total, \$4; per capita cost, \$1.33.

Packard, 24-horsepower; Dr. C. B. Parker, four passengers; Brooklyn to Poughkeepsie, 8 gallons gasoline, \$2; Poughkeepsie to Brooklyn, 6 gallons gasoline, \$1.50; ½ quart oil, 14 cents; tire and repairs, \$1.35; total, \$2.90; grand total, \$4.99; per capita cost, \$1.24; per capita cost for fuel and lubricant, 91 cents. Not competing for prize.

Zust, 50-horsepower; Raymond Healy, five passengers; Brooklyn to Poughkeepsie, 12 gallons gasoline, \$3; Poughkeepsie to Brooklyn, 15 gallons gasoline, \$3.75; grand total, \$6.75; per capita cost, \$1.35. Disqualified because owner did not drive.

Stevens-Duryea, 20-horsepower; William T. Wintringham, four passengers; Brooklyn to Poughkeepsie, 6 gallons gasoline, \$1.50; Poughkeepsie to Brooklyn, 6½ gallons gasoline, \$1.62½; 1½ pints oil (entire trip), 12 cents; grand total, \$3.24; per capita cost for fuel only 81 cents. Broken spring not replaced. Disqualified.

PROGRESS OF THE SELDEN CASE

New York, June 20—Special telegram—John B. Trevor was adjudged guilty of contempt and fined \$100 by Judge Lacombe for using an unlicensed Panhard imported by him. George B. Selden is expected to conclude his testimony today. He has been on the stand since May 2. Dougald Clerk, an English expert and technical writer, who has been retained by the Electric Vehicle Co., is expected to arrive early in July to testify in favor of the patent. Just when he will go on the stand is not known.

SPLIT IN TIRE RANKS

Goodrich Company Decides to Withdraw from Association, Which May Disband

New York, June 15—At a meeting of the tire association, held in its offices today, the B. F. Goodrich Co. gave notice it would on September 1 withdraw from the association. That this means the breaking up of the tire pool there is no doubt and, in fact, it was frankly admitted today by at least one of its prominent members to your correspondent. The first to attack the pool openly was the American Motor Car Manufacturers' Association, several of whose members backed financially and made possible the establishment in this city of an independent factory by the Ajax Standard Rubber Co., promoted by Horace de Lisser, the former sales manager of the International A. & V. Tire Co. It is said that the A. L. A. M. members also took a quiet and effective hand through protests against being compelled to take other tires than those originally chosen whenever their supplemental orders might happen to carry the company in question beyond its pool allotment.

Last autumn the Tire Association arranged for an output of \$9,000,000 and allotted the product as follows: Rubber Goods Co., embracing Hartford Rubber Works Co., Morgan & Wright and G & J Tire Co., 33 per cent; Diamond Rubber Co., 23 per cent; B. F. Goodrich Co., 23 per cent; Fisk Rubber Co., 9 per cent; International A. & V. Tire Co., 6 per cent, and Goodyear Rubber Co., 6 per cent.

Under the pool agreement a member had to pay a 40 per cent tax into the association on any excess of its monthly allotment. That a maker whose business exceeded its allotment should complain was natural. That the impossibility of any allotment satisfactory to all being arrived at was at the bottom of the break in the pool is probable, since the combination needed every link in its chain intact to make it effective and desirable.

Chicago, June 20—The announcement that the Goodrich company had given notice of its withdrawal from the tire association did not create so much of a stir in trade circles as might have been expected. Automobile and tire makers asked for opinions by wire were not inclined to discuss the subject in view of the fact that details were not at hand. President Butler and Manager Philp, of Morgan & Wright, had little to say of the move, but thought it would have no effect upon the business one way or the other. Mr. Butler believes the association has been a good thing for the automobile business, inasmuch as it has been the means of producing better tires and of getting makers to adopt sizes to withstand heavy weights.

He further expressed the opinion that, through the association indirectly, by means of making better tires and insisting upon the use of tires of sufficient size, a large percentage of the troubles of automobileists had been eliminated, the public had been relieved of the tire bug-a-boo and had taken to buying and using automobiles, whereby the automobile makers had profited. Mr. Miller told at some length the troubles in bringing tires to their present state of perfection and thought the association largely responsible for this.

Akron, O., June 19—In reply to a request of Motor Age to express an opinion about the notice of withdrawal given by the Goodrich company, Secretary Miller, of the Diamond Rubber Co., said:

We prefer to make a statement rather than express an opinion. We have known for several months that it would be a very difficult matter for the association to give us an allotment sufficiently large to care for our business. We knew of no member of the association willing to give us enough to make it interesting to us to remain in the association. We were simply awaiting developments and, on Friday, when the Goodrich company stated that it would not renew the arrangement for another year, we were not at all surprised; in fact, we were glad of its decision, because it will enable us to run our factory to its fullest capacity and increase our facilities, if the demand makes it necessary, in order that we may furnish the Diamond tires which are demanded by the trade. We are also very glad to be relieved of the taxation that went with an overproduction—money which went into the treasury of the other members of the association and money which we now can well afford to give to our customers. It has been the Goodrich company's feeling all along that it would never remain in the association if it were obliged to take a smaller allotment than the Diamond company. We think the association has been a benefit to the automobile industry. By being together we have been able to educate automobile manufacturers, dealers and consumers as to the right size of tires to use for a given weight, thus avoiding the danger of overloading tires, and, further, by means of uniform prices, the tire manufacturers have been able to work out the problem of making good tires, not being restricted to any great extent in price, and could afford to use the best materials obtainable. Some of the members have profited by this opportunity, while others have not; but, on the whole, we think the automobile industry is very much benefited, although we do not believe if the association had continued it would have been of any benefit to the industry. So far as the Diamond company is concerned, we have learned how to make first-class tires and will always continue to do so regardless of competition. Our policy will be to maintain our quality and improve it where we can, and by adding a reasonable profit to our cost fix selling prices regardless of competition. We do not propose to let competition disturb us or cause us to make a grade of tire which we know will not maintain the present reputation established the past 2 years by the Diamond tire.

MUST REMOVE GASOLINE

Chicago, June 20—Commissioner of Public Works O'Connell has served notice on twenty-five local automobile dealers that they must remove within 24 hours their supply of gasoline now stored under the streets and fill up the cavities. If the dealers do not do this the commissioner will and charge the dealers with the cost. It is estimated there are 5,000 barrels of gasoline involved in the order.

RELAY TO NEW YORK.

Chicago, June 20—The relay race promoted by the Chicago Examiner between this city and New York left here at 8 o'clock Monday morning. The courier had reached Delhi, N. Y., at 5:30 o'clock this afternoon. He is hours behind schedule.

ON THE EVE OF THE GRAND PRIX

Thirty-four Cars, Representing Thirteen Different Manufacturers, Will Start in France's Big Race Over Sarthe Course Next Week—Gabriel To Be First Away

Paris, June 10—This is what might be called the eve of the grand prix, for although that big event is still a few days more than 2 weeks off, this is the last mail that can reach *Motor Age* before the race is run, June 26-27. To say all is excitement in French motoring circles is putting it mildly, for never before has the entire country been so enthused over an automobile contest as it is over the Sarthe event which is expected to demonstrate just how the French think a race should be run. Of the thirty-four cars entered France has twenty-five, Italy six and Germany three, so the chances of the honors coming to this country are more than bright; in fact, it looks like a case of "heads I win, tails you lose" so far as Italy and Germany are concerned.

Every care is now being bestowed in preparation for the grand prix, and slight attention is being paid the sneers gratuitously given by England in respect to the unfairness of this race. Envy at the ability of the French club to choose such a beautiful circuit and jealousy at the splendid entries made for the race are attributed to the writers in the trade journals across the channel, when they seek to disparage the strenuous efforts to make a success of the event on the part of French makers. They point to Italy and Germany as being sharper to appreciate the advantages which a foreign victory would give to any of the competitors, in view of the great majority of French cars in the race. In fact, a foreign victory, in the face of overwhelming numbers of French cars, would undoubtedly prove to be a setback to French interests in the race, and this is one reason the more that Frenchmen are decided to strain every nerve for victory, which is by no means so assured to the French cars as might appear from the list of entries.

Since the publication of the official list of starters it is clearly apparent why France should be uneasy over the probable outcome of the contest, for the luck of the draw has brought to the front the redoubtable Lancia, who will start second, only 1 minute 30 seconds back of the de Dietrich man, Gabriel. Let Lancia make up that handicap and it needs must be a fast car that can overhaul the Italian. But the fiery Sisz will be at his heels, while back of the Renault driver is none other than Hemery. Surely the four named ought to burn up the road for the first day at least.

A new scheme has been adopted in numbering the cars in the race. One number is given to each firm—thirteen in all—and each one designates its cars, a, b or

c, according to the number of cars it has in. Of course, there will be thirteen "a" cars but only eleven "b," because of the Gobron and Vulpes each having only one candidate. The Gregoire has two, so this leaves only ten cars in the third division. The complete list, with the time of starting, follows:

	h. m. s.
1a—Lorraine-Dietrich I, Gabriel	6:00:00
2a—Fiat I, Lancia	6:01:30
3a—Renault I, Sisz	6:03:00
4a—Darracq I, Hemery	6:04:30
5a—Brasier I, Baras	6:06:00
6a—Mercedes I, Jenatzy	6:07:30
7a—Gobron I, Rigoly	6:09:00
8a—Itala I, Cagno	6:10:30
9a—Gregoire I, Taverneax	6:12:00
10a—Panhard Levassor I, Teste	6:13:30
11a—Vulpes I, Barriaux	6:15:00
12a—Hotchkiss I, Le Blon	6:16:30
13a—Bayard-Clement I, A. Clement	6:18:00
1b—Lorraine-Dietrich II, Rougier	6:19:30
2b—Fiat II, Nazaro	6:21:00
3b—Renault II, Edmond	6:22:30
4b—Darracq II, Wagner	6:24:00
5b—Brasier II, Barillier	6:25:30
6b—Mercedes II, Mariaux	6:27:00
8b—Itala II, Fabry	6:28:30
9b—Gregoire II, Clivelli de Bosch	6:30:00
10b—Panhard Levassor II, Heath	6:31:30
12b—Hotchkiss II, Salleron	6:33:00
13b—Bayard-Clement II, Villemain	6:34:30
1c—Lorraine-Dietrich III, Duray	6:36:00
2c—Fiat III, Weilischott	6:37:30
3c—Renault III, Richez	6:39:00
4c—Darracq III, Hanriot	6:40:30
5c—Brasier III, Pierry	6:42:00
6c—Mercedes III, V. Florio	6:43:30
8c—Itala III, De Caters	6:45:00
10c—Panhard Levassor III, Tart	6:46:30
12c—Hotchkiss III, E. F. Shephard	6:48:00
13c—Bayard-Clement III, de la Tou loure	6:49:30

In the big race there will be the first practical demonstration of the practicability of the patent rims. The Bayard-Clement, Brasier, Panhard and Itala cars will be equipped with patent mobile rims, because of the new rule requiring each driver and his mechanic to make their own tire repairs. Having a spare inflated tire on the patent rim, it is expected it will be a simple matter to slip off the damaged pneumatic and fit the rim much more rapidly than could be done even under the old system, when a dozen or more men, all experts, worked tooth and nail, at the tire controls, cutting off tires and putting on new ones. With the patent rim the work can be done faster by two men.

PEUGEOT WINS CUP RACE

Paris, June 4—The Rochet-Schneider cup was today contested on the classic Auvergne circuit, in superb weather conditions and achieved a great success from a spectacular as well as a technical standpoint. The organization was excellent and the contest passed off without the least hitch. Nineteen competitors started out of a total of twenty-two entries, and all nineteen fulfilled the conditions of the contest and finished the race over the 200-mile circuit. Once more and for the second time in succession, Perret, on an 18-24-horsepower Peugeot car, won with a maximum number of points—1,200—for regu-

larity, speed, consumption of gasoline and water. There was a hill-climbing test over 2½ miles, and the winner did this in 7 minutes 36 seconds, thus gaining 200 points. Eight other cars did as much, however. As regards price, the Peugeot car was the cheapest in the contest, being listed at \$2,000, whereas the average price for the other cars was \$400 above this figure. The price of the car had something to do with the points gained, for 200 points are given to the cheapest car and one point is deducted from 200 for every \$20 exceeding this price in the case of the other competitors. The Bayard-Clement took second and fourth places, with excellent figures—1,150 and 1,133 respectively, the consumption of gasoline being greater, as the cars were heavier and larger. The Clement cars, in fact, consumed but 3 gallons of gasoline per 62 miles of circuit, and the Auvergne circuit is not an easy one. The rules exact a speed of 19 miles on the grade where the test was held, and the above consumption is really an excellent criterion of the cars in question. A Rochet-Schneider car arrived third, with 1,144 points. Most of the competitors obtained over 1,000 points out of a possible 1,200. The victory of Perret will keep the cup in the Auvergne club's premises.

SCOTS GET BIG ENTRY

London, June 9—The Scottish reliability trials, which start on Wednesday next from Glasgow, have secured no less than eighty entries. These include eight cars whose chassis price does not exceed \$1,000; fourteen cars whose chassis price exceeds \$1,000 but does not exceed \$1,750; twenty-two cars whose chassis price exceeds \$1,750 but does not exceed \$2,500; twenty-four cars whose chassis price exceeds \$2,500 but does not exceed \$3,250; twelve cars whose chassis price exceeds \$3,250.

These figures go to indicate pretty fairly the tendency of the motor car trade here at the present time. The small car is not selling to anything like the extent which one would have considered likely. Of course, manufacturers assert they are behind in delivery on these, but that is merely because none of them is turning out small cars in anything like quantity. The cars which are selling here at the present time and which are practically purchased as soon as finished, are the 12-15-horsepower and the 15-20-horsepower four-cylinder types, whose price, it will be seen, run from between \$1,500 and \$2,500.

There are in the entries fifteen single-cylinder cars, twelve two-cylinder, no three-cylinder and half a dozen six-cylinder cars. A curiosity, rather, is the two-cylinder Arrol-Johnston, which is to be found in the class whose price exceeds \$2,500, while below it, in a class whose limit is \$2,500, is a six-cylinder Calthorpe car, so that one will see values are pretty mixed on this side, and a good deal de-

pends on the name plate on the car when it comes to selling. To indicate the manner in which the event has been supported the writer might enumerate the following: Among the British-built are the Rover, Swift, Adams-Hewitt, Ridley, Albion, Arrol-Johnston, Humber, Argyll, Kelvin, Scout, Leader, Alldays, Vulcan, Sunbeam, Siddeley, Speedwell, Wilson Pilcher, Talbot, Calthorpe, Maudsley, Rolls Royce, Iris, Enfield, Drummond, Austin, Brooke, Horbick, Bell, Daimler, Ariel, Belsize; while foreigners are represented by the Maxwell, Cadillac and Pope-Tribune, from your side; by Darracq, Germain, Minerva, de Dion, Vinot, Chenard & Walcker, Marchand, Peugeot, Pipe, Pilain, Spyker, Martini, Brasier and Metallurgique from the continent.

BUFFALO'S FLORAL PARADE

Buffalo, June 15—Local automobilists did themselves proud last night. The occasion was the second annual decorated and illuminated parade, held under the auspices of the Automobile Club of Buffalo. It was shortly after 8 o'clock when President Meldrum with D. E. Harmon, F. M. Hoffman, A. Roy Knabenshue and J. R. Thomas, Jr., started away from in front of the clubrooms in the Teek building. The machines moved slowly down Main street, remaining about 40 yards apart. After turning at the Liberty pole the motorists drove back through Main street to Athletic park, where the machines were driven onto the cement circle, where the decorated cars were judged by Harry Thorpvars, chairman; Mrs. John Gibson, Mrs. H. A. Knoll and Mrs. Dai H. Lewis. Albert Poppenberg's Rambler captured the handsome trophy, a large silver cup. The second prize was awarded to Mr. Meldrum, but it was given to Dai Lewis as Meldrum refused to accept it, being president of the club.

SIDETRACKS FOR YEAR

Paris, June 9—At the meeting of the sub-committee of the French automobile club the European circuit question was discussed and official replies from Austria, Belgium and Italy were read, all much in favor of the adjournment of the tourist contest until 1907. Thus, without a dissenting voice, the whole of Europe joins in the request of Germany that the circuit be postponed for a year. The matter had formally been referred to the committee of the Automobile Club of France occupied with this particular event. The sanction will of course be given as a matter of course. The whole affair has fallen very flat in France and not a single protest has been heard on any side. Evidently makers are so busy straightening things out after the delay due to the strike that little time or inclination is left to attend to the voluminous details affecting a 3,000-mile tour. Nevertheless, it is an understood thing that the contest is simply postponed.

ITALY NAMES ITS MEN

Lancia, Nazaro, Weilschott, Cagno and Fabry Will Represent the Country in Vanderbilt

Milan, June 5—The Automobile Trade Federation met here recently and unanimously decided to be officially represented in the Vanderbilt race, in view of the importance of the event and the real benefit which a victory would bring to the Italian industry. However, in view of the pressure of business, it was decided that no eliminating races would be held, the budget of the Italian club not permitting of great expense, and the date of the Vanderbilt race being too near to allow of time being lost in preparations. The Fiat and Itala cars were immediately and unanimously singled out to defend Italian interests, three Fiat cars and two Itala cars being chosen. Cagno's and Fabry's names were tacked on to these makes as drivers. The Chevalier G. Coltelletti was also chosen as official delegate of the Italian club for this event. Lancia, Nazaro and Weilschott are the Fiat choices. After considerable discussion, it was decided also that Italy should oppose Britain's proposal to revive the Bennett race, but that Italy should be officially represented at the international meeting at Pont de Gennes on June 25, to consider the question. No enthusiasm, however, is being shown anywhere to the idea that the Bennett cup could be usefully raced for under existing conditions.

New York, June 18—Italy will be the first country to enter a team for the Vanderbilt cup meet. A cable received by E. R. Hollander, the representative of Italy's national organization, from the Marquis Ferrero di Ventimiglia, president of the Automobile Club of Italy, gives the information that the entry blanks have been filled out and already mailed, accompanied by a draft for \$5,000, the fee for a full team of five, consisting of Lancia, Nazaro and Dr. Weilschott, who will drive Fias, and Cagno and Fabry, who will pilot Italas.

Another interesting bit of Vanderbilt cup news is that the Locomobile Co. of America is building and will have entered two racing cars for the eliminating trial. They will, it is said, follow almost exactly the power and lines of Dr. Thomas's car, which finished third last year. The Locomobile representative, who gave out the news, said Joe Tracy would drive one of them and that a pilot is being sought for the other. Tracy, however, laughed when your correspondent spoke to him of the report and intimated that no such arrangements had at least yet been concluded. Tracy, you know, has been consulted as to various constructive points of the Oldsmobile, B. L. M. and, they say, Maxwell-Briscoe cup candidates, and named as a possible driver of each of the

three. The Locomobile man could give no information as to Dr. Thomas's intentions of entering his highly successful car of last year.

Harry Maynes, who has been driving the Grout steamer, is to be the pilot of the B. L. M. car and Elliot F. Shephard, Jr., will drive a Hotchkiss car should he be successful in qualifying with it for the French team through his performance in the grand prix.

"The Wayne Twins," the Detroit company's 50-horse power stock car candidates for the race, are reported to have been shipped from the factory for exhibition here for a few days before being sent to the course. It is said that the Frayer-Miller engine has been completed and fitted to a chassis for road trials. The 60-65-horse power Matheson is said to be receiving its final touches at the factory at Wilkes Barre.

A cable was received today by S. B. Bowman from the Bayard-Clement people asking how Albert Clement could be entered for the Vanderbilt. This shows how France feels about the race.

AFTER STANDARD RACE RULES

Paris, June 10—The last meeting of the French automobile club and its sub-committees considered some rather important resolutions. One was concerning a proposed test for electric vehicles, to be officially held in Paris at the next automobile show in December. There was a test made last December, but the regulations were not such as might be acclaimed as the acme of fairness and the French club practically decided to take the matter in hand this present year and ascertain the progress made in recent years by electricity as applied to automobile work. The second resolution concerned regulations for races and similar events. It appears that even the French club is not satisfied with the present state of affairs, and it proposes an international discussion of the question of standardizing rules and regulations affecting international events. This resolution was adopted just about the same time as the Italian club adopted something to the effect that it reserved the question of a further consideration of regulations affecting automobile races, while opposing, on principle, the revival of the Bennett cup race.

BIG FRENCH FÊTE

Paris, June 8—The Automobile Club of France decided at its last meeting to patronize a fête which will be held in the grounds of the Versailles palace by the Touring Club of France to celebrate the inscription of its 100,000th member. This event is billed for the early days of July. A lunch and an entertainment will be followed by a gigantic procession of cycles and automobiles all the way over the 12 miles from Paris to the royal town of Versailles. A retreat by torchlight will end the red letter day in French sporting life.



MOTOR AGE

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JUMBLE OF LAWS IS THE REAL MENACE

INDICATIONS have always pointed to the fact that while a jurist may be clever in the matter of passing upon the validity of laws, he is not a good maker of laws. This indication is strongly supported by the expressed opinion of Judge John Gibbons, of Chicago, whose many years of observation from the bench have given him the idea that he is a competent critic in matters that ought or ought not to be when it comes to passing legislation for the guidance of the common people. Among other changes in the existing laws Judge Gibbons would compel automobile owners to provide bonds to indemnify people they may injure and make the maiming of anyone by an automobile *prima facie* evidence of negligence on the part of the owner. A judge of the years of experience of Mr. Gibbons is, of course, entitled to respectful hearing, at least in ordinary cases, but it is peculiarly apparent that here is a topic to which Judge Gibbons has not given as much study as he would were it a case to be decided after it had been before him sufficiently long for him to hear the arguments of counsel on both sides. It is to be feared Judge Gibbons has fallen into the way of a good many people who do not own and do not drive automobiles—that of passing opinion before all the facts have been gathered and fully considered.

There isn't the least danger that the legislature of the state of Illinois will pass any such law and there is still less likelihood that the supreme court of the state, if called upon to pass on the validity of the law if spread upon the statutes, would permit it to remain there very long. Beyond the annoyance of having such matters brought to the attention of the public for discussion, thereby keeping the public mind stirred up, the suggestions can do little harm—at least to motorists and motoring. Similar suggestions are forthcoming weekly from some source and probably will be on the wing for a good many years to come.

The trouble is not alone with the non-

motoring public, the authorities or the antagonistic lay press—the motoring organizations themselves have some part of the burden of blame to carry. There is today a great conflict of laws in the various states, counties, cities and towns. There is not the least reason why there should be such a wide difference in the matter of automobile regulations, for what will fit one city will fit another, what is good law in one state ought to be good in another, and what will be upheld by the court of final resort will have to be satisfactory to each and all communities. Herein, then, is where the motoring organizations themselves come in for their share of whatever blame there is to be attached in the matter of disagreeable laws that now exist or that may exist.

If the various motoring organizations could step low enough to get together for a moment it would be found that a general vehicle law could be drafted that

PIERCE'S PRIZE WAS EXPERIENCE GAINED

S SOON as the news was flashed around the world that Percy P. Pierce had not been successful in winning the Herkomer trophy, makers and others in the trade immediately wondered if it paid to advertise the fact that he was beaten by a number of foreign cars and thus would possibly lose some prestige at home. There is every reason to believe the experience the Pierce people have secured directly through the Herkomer tour will prove of immense value before another season shall have passed. There can be no disgrace in not winning first place in such a contest and with a hundred and a half starters—at best it was a 150 to 1 shot, to say nothing about being in a strange land and in the enemy's territory. The loss of the trophy itself could well be compensated for when the experience gained is taken into consideration. Does anybody suppose American makers go into contests abroad absolutely sure of winning? Even an American, confident as he is in himself and his own, could not think

could be made to fit not only New York, but Illinois, Minnesota, Nevada, Texas and any other state, county or town that could be named. Such a measure, if made reasonable not only to motorists but to the user of horses and the pedestrian, and if devoid of frills, could find its way on the statute books of any state or municipality, there to remain until such time as changed conditions should demand that it be replaced by legislation more befitting the time and conditions existing.

There will never be peace in motoring so long as the motoring organizations are content to let things drift along as they have been drifting for a number of years. Reasons can easily be assigned for the present state of affairs, and after all the reasons have been given it will be found that in a number of cases at least personal enmity or personal aggrandizement has been at the bottom of the entire trouble. If there are officers who are cursed with personal enmity or personal aggrandizement, they should be removed, no matter how popular, how experienced, or how valuable—any organization can well get along without such.

Promoting tours, running races, publishing maps and similar work is part of the organizations' functions, but the status of the motorist is treated like the child of the drunken parents and permitted to shift for itself when it happens to be the particular child that needs a parent's kindly attention. Motor Age has called attention to this subject a number of times when treating upon a variety of topics. In all that has been said no mention of a single name has been made, although there have been openings that permitted it; possibly in the future it will not feel so generously disposed.

this. If Mr. Pierce had supposed he could receive no benefit from the tour, even though his car did not win, there is little likelihood he would have gone abroad. There may have been a little advertising in the trip, but there was more experience than anything and, in the long run, this will prove a more valuable asset than the advertising or even the winning of the cup itself. To win such a contest means much, it is true; it means immediate returns for a comparatively small advertising expenditure, but while the benefits derived may be welcomed they cannot give the substantial returns that the experience gained on such a tour will give. It is not the winner who always gains; the defeated learns more than the victor and naturally, then, is the gainer in the long run. This argument will be taken as offering an excuse for Mr. Pierce not winning the trophy. Such is not the case; it is an argument to show that though he did not win first place he did win more than one might imagine at first and which will be of benefit to him.



MOTORING'S BENEFACTOR

Reports indicate the dissolution of the tire association, through the withdrawal of one of its members. The automobilist should not become too jubilant over any such announcement. It does not mean a price-cutting war by any means, and if it did, it is more than likely that it would carry with it quality-cutting. Ordinarily people get no more than what they pay for; usually they get all they pay for. The tire association did not alone regulate prices; tire makers outside of the association asked as much as association members. The association undoubtedly has done much for automobiling. It might have sold tires for less than it did, it might not have restricted the output of its members and it might not have done other things—and there were a lot of things it might have done that it did not do. The association was responsible for the use of larger and heavier tires, and this scared away the tire bug-a-boo, and made automobile buyers; it brought the automobile tire to its present quite satisfactory state; it maintained prices and prevented a whole lot of abuses that naturally had to fall upon the tire makers' shoulders and of which nothing could be said. The association, when formed, was looked upon as an octopus; today the largest manufacturers are strong endorsers of the association and its methods, believing that it has been responsible to a large extent for the success of automobiling.

The Week

Seventeen entries officially received for Glidden tour; decision arrived at to have two or three controls each day; accommodations arranged for big crowd.

Ten out of fifteen cars survive in Long Island Automobile Club's economy test, first prize going to S. H. Burns, who drove a Packard.

Everything in readiness for start of grand prix race over Sarthe circuit, thirty-four cars being nominated.

Twenty-three tri-cars, runabouts, motor cycles and bicycles finish tour of France, Vulpea car being first.

Details of start of Herkomer tour tell of enthusiasm shown at Frankfort; winner drove Horch car.

Commissioner of public works orders Chicago dealers to remove gasoline stored under streets.

France's big commercial test starts from Paris, with twenty-nine vehicles in line.

Nominations of three Fords and two Italas sent in for Vanderbilt race.

Goodrich company gives notice of retirement from tire association.

H-O-R-C-H—that's the Herkomer car. Translated it means dark horch.

The Goodrich company evidently did a horseshoe nail stunt on the tire associa-

Lancia, Gabriel, Sisz, Hemery, Jenatzy, Cagno, Teste, Nazaro, Duray, de Caters, Tart and a few more crack drivers in the grand prix—and who will win the big road event?

Prince Henry wasn't afraid to speak out in the meetin'. His holler was followed by the disqualification at once of the Fords for not having enough body. Hoch der prince!

Philadelphia aldermen want a law to compel every Quaker city automobile to use denatured alcohol. The measure is a quick cut to notoriety for the framer, but how foolish!

A Boston motorist complains that the price of gasoline jumps about a cent per gallon per week. While this cannot hasten free-tax alcohol, it indicates that the Standard Oil Co. is pretty sure that now is the time to make hay.

About the time a dozen or so alcohol distilleries have been set in motion and a few makers have put alcohol carburetors on the market, there ought to be a generous slump in Standard Oil, which will please Tom Lawson immensely.

Who said Chicago is a dead one? A tri-cornered tour and a road race to be promoted by the local club and a reliability test by the dealers, not to forget a couple of orphans' days, make up a pretty good bill of fare. All that's left is to make good the promises.

A little 18-20-horsepower car proved the winner of the Herkomer trophy, and this fact has only furnished food for those who are inclined to continue to argue over the quantity of power one should have up his sleeve for touring purposes. Both sides have been proved, so take your pick.

The American Automobile Association, the American Motor League, or some other motoring organization, ought to appoint a showing committee to illustrate the fallacies of all that is said against the automobile and automobilists. For the sake of politeness it might be called an educational committee.

A WEAK DEMONSTRATION

It has been the aim of the Motor Age to be not only right but consistent; it has been opposed to scorching and to reckless driving. No one will claim this stand to be inconsistent or wrong. It has not favored ultra-conservative speed laws, believing that time, place, circumstances and common sense should govern in the matter of speed. A combination of papers has just promoted a relay drive from Chicago to New York on the pretext of demonstrating what the motor car can do in time of war. It was not done for that purpose; it was done for advertising. The federal government had nothing to do with it and probably is little interested in the stunt. If permission from all the authorities along the route to hold the event had been secured it might not be deserving of censure, but it is boasted that 50-mile speed is maintained on the public highways. When the authorities of towns have to use guns to stop the scorching—then the whole affair deserves censure. The very papers promoting the affair are usually motorphobists and consequently inconsistency bubbles out in all directions. Of those who drove—individual owners, makers and dealers—they should not have been tempted to do injury to automobiling by taking part in a cross-country run at speed limited only by the conditions of the roads and the capabilities of the cars. Motorists and motoring have been done an injury by this advertising affair of the dailies.

Coming Events

June 26-27—Grand Prix race, Sarthe course, Automobile Club of France.

July 5-28—A. A. tour; Glidden trophy competition, starting at Buffalo July 12.

July 14-17—Automobile racing at Ostend, Belgium.

August 5-8—Touring car competition, France.

August—Circuit des Ardennes race, Belgium.

August 27-September 2—Brescia, Sicily, events. Automobile Club of Italy.

September 1-10—Auvergne cup competition, France.

September 2—FloMo cup race, Brescia, Sicily. Automobile Club of Italy.

September 9-20—Automobile meet of Palermo, Italy.

September 15-16—Mount Ventoux hill climbing competition, France.

September 18—Touring car competition of Provence, France.

September 23—Semmering hill climbing competition, Austria.

September 23—Auto-Cycle Club of France cup race.

September 27—Tourist trophy race, Isle of Man. A. C. of G. B. & I.

TO SHOW THEIR WORTH

French Commercial Vehicles Start on Long Trip, Leaving Paris Twenty-Nine Strong

Paris, June 6—The start of a group of some thirty omnibuses and industrial vehicles this afternoon on a trip of several days' duration, with Tourcoing as the goal, is sufficient evidence of the fact that French automobile makers are beginning to realize that the industrial development of the motor car is as essential to an even development of French as it is to German and British enterprise. Last year a simi-

filling up the available space before the automobile club.

One or two of the wagons were old staggers, having served their time in more than one concours, but several were about to make their maiden journey which, by several stages, finishes at Tourcoing, where the cars and wagons will remain on view at the exposition of the textile industries now being organized in that city.

All the cars got off before 3 o'clock, the first stage being 30 miles to Pontoise, via Versailles and St. Germain. Tomorrow they will do a second 31 miles to Beauvais, and proceed thus by easy stages to their destination. The time for their performance has been limited and the wagons

FRENCH COMMERCIAL TEST—GENERAL VIEW AT THE START



lar parade of industrial wagons took place, but the entrants this year is beyond comparison, both in respect to quantity and quality.

Early in the day the cars, previously loaded by living freight and dead weight in the shape of sandbags, were passed over the weighbridge in the Tuilleries gardens, and about 2 o'clock in the afternoon the attention of a few curious was directed to the splendid light Bayard-Clement omnibus, a new construction, which was the first to arrive before the premises of the Automobile Club of France in the Place de la Concorde. There were very few people awaiting the start, but a few minutes later, when another omnibus arrived, followed by the Aries, Peugeot, Auto-Camion and Brillie, a crowd collected to examine the lorries, for a collection of so many industrial vehicles is still an event in Paris. The departure of class 6 had been made an hour or more earlier, this class composed of seven heavyweights, calculated to transport between 3 and 6 tons of merchandise. The remaining five classes lined up and made a goodly showing, quite

will have no time to loiter on the way. The heaviest cars, which got off soon after midday, were given 7 hours to cover the distance to Pontoise, quite a respectable speed in view of the loads carried.

Altogether there were twenty-nine starters, four of which were omnibuses, one being of the type soon to be placed in service on the Paris streets. In the second class came six motor cycles or tri-carriers built for transporting at least 110 pounds. Then come the various classes of delivery motor carts.

GO AFTER A BIG PRIZE

Contestants for Herkomer Trophy Leave Frankfort, Crowds Cheering Them

Frankfort, June 6—This morning, in clear, bright weather, the start of the cars on the Herkomer tour was made amid the acclamations of an assembled crowd. The tour is most popular and from the large numbers of people who inspected the competing cars yesterday one can judge of the interest taken in the contest, especially since Prince Henry of Prussia has shown such keenness in the preparations. This morning, for instance, he was at the head of a movement which had as object the carrying out to the letter the regulations affecting the tour. One of these concerns the carriage work of the competing car, which must be, in the actual words of the regulations, "comfortable." As this word gives a meaning approaching closely to "luxurious," it cannot be a surprise to readers to know that the protest, which was, in fact, strongly backed by Prince Henry, hit hard the Fiat cars, which arrived fresh from the Milan gold cup contest, dirty and travel-stained, and with bodies which may be likened in their simplicity to the proverbial soapbox. The Italian cars, together with about a dozen German, were excluded from the race and the Fiats are covering the cir-



FRENCH COMMERCIAL TEST—VIEW OF THE CARS ENROUTE

cuit unofficially. Lancia is not on the spot, his work in connection with the French grand prix holding him on the Sarthe circuit. The British Daimlers, which made a good impression last year, are also to the fore this year. There are thirteen of them. They are supposed to give 45 horsepower, but may be more powerful than this. Nothing under 16 horsepower is taking part in the tour and most of the cars are heavier than 30 horsepower. Jarrott, in a 30-horsepower Crossley, was disqualified at the last moment.

Ladenburg, the winner of last year's cup, collided with another car before the start and is out of the running. Weiss, of Munich, who ran a Benz machine, overturned at a sharp turning and has abandoned the tour. Beyond the above, no accidents marred the first day. By 7 o'clock this evening ninety-two cars had entered Munich, where the start will be made at 5 a. m. tomorrow.

Munich, June 7—Out of 156 entries, 134 are actually on the road, the remainder having been disqualified or withdrawn. Prince Henry of Prussia arrived seventh last evening at Munich. Percy Pierce, the only American driver, received quite an ovation from Americans in this town and a deal of interest is evoked from the fact that he is the only American in the tour. The roads are very dusty and the surface is only fair. Large numbers of tires have given out, owing to punctures, and the hot weather has made the going very arduous. This evening rain has fallen, and the second stage will not be so agreeable. Everyone says that the roads are particularly hard on tires, but good humor is the order of the day. The peasants throughout the course bow profoundly at the passage of every car, not knowing which pair of goggles may shelter the eyes of the august Prince Henry. The number of competing cars started on the second day was 122. The weeding out process has commenced. From Linz a telegram says the half stage has been passed

TOUR OF FRANCE ENDS

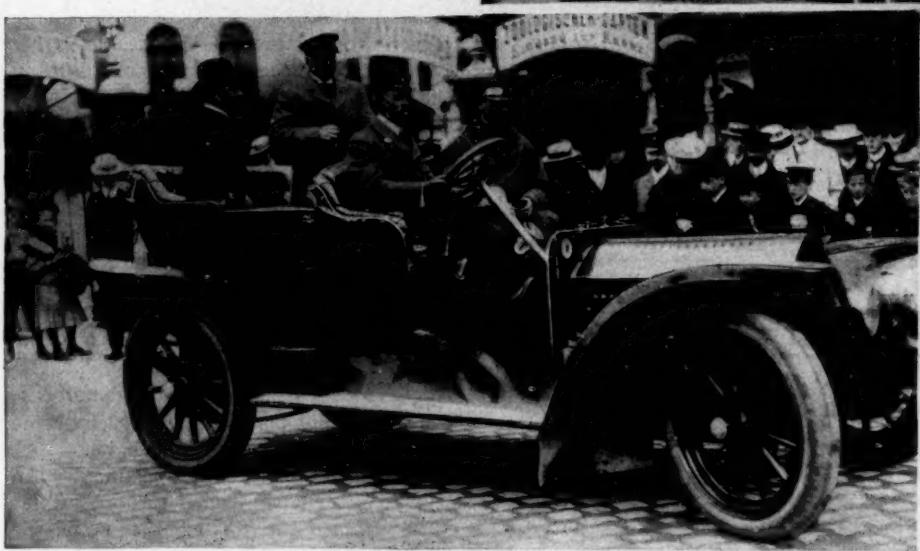
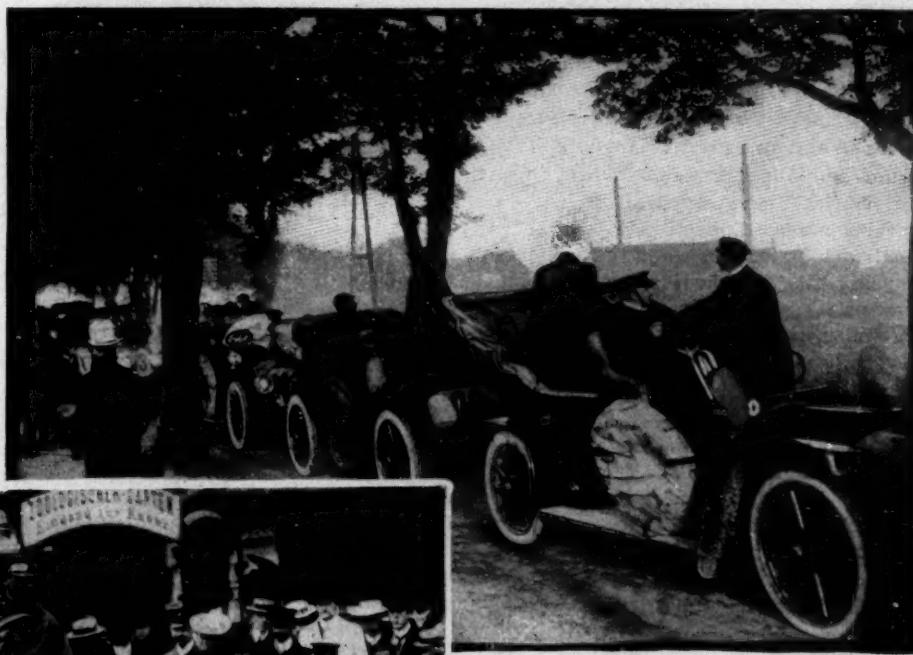
Vulpes Runabout First to Finish in Long and Tiresome Test —Twenty-Three Survive

Paris, June 11—After thirteen long and tiring stages, twenty-three tri-cars, runabouts and motor cycles have completed the tour of France for these classes of machines, out of thirty-two started. The runabouts did the job easily, for among the four cars finishing the 1,500-mile trip, only one was penalized and that only to the extent of two points. The Vulpes runabout arrived first, followed by the de

others had 2,000 or more against them. The two first arrivals were fitted with Peugeot motors. The tour was a great success for the popular light vehicles, or runabouts, and as these machines are being turned out cheaply and with good guaranty they will do much to oust their rather formidable competitors for popular favor, the tri-cars, which have made their appearance almost entirely within the last 2 years, to the prejudice of the more solitary motor cycles.

Although the contest was limited to what may be termed the small fry of motorizing the enthusiasts followed the progress of the tour with great interest, for here in France the runabouts are prov-

THE HERKOMER TOUR—LINED UP FOR THE START



THE HERKOMER TOUR—PRINCE HENRY GOING TO THE STARTING POINT

happily and without any accidents to the competitors. Everyone considers that Prince Henry is a great stickler for etiquette to insist so stoutly against the inclusion of cars with insufficient carrosserie.

Chicago, June 20—It is known here that the car driven by the winner of the tour, Dr. Rudolf Stoess, was an 18-20-horsepower Horech, a machine unknown outside of Germany. The second to finish was a Benz, and the third a Mercedes. Percy Pierce, although not in the first ten, was one of forty to receive a gold medal.

Dion and de Dion, none of these having any points chalked against them. Three Austral tri-cars arrived at the head of the tri-cycles with 350 points against them, of which the first arrival had 51. Some of this class had penalizations between 1,000 and 5,000 points. The lighter motor cycles did even worse, none arriving with less than 2,400 points to the bad, the sixth arrival having over 6,000 points against him. The Aleyon bicycle came in first, followed by a Knap. A Peugeot cycle arrived without penalties, although

ing most popular with those whose pocketbooks will not permit them to go into the sport very extensively. The makers realize that this demand is worth catering to, and the output this year has more than a fair sprinkling of the little rigs. Commercially the tri-cars have made a hit and that they should perform in such a creditable manner is singularly gratifying to those who have been boosting them through the columns of the press. The motor cycles always have been consistent performers, and it is safe to say that in this tour of France they came up to the expectations of everyone interested in this type.

BUSES AFTER KING'S PRIZE

Milan, June 2—Four omnibuses today covered without a hitch the tests connected with the king's prize, by which the omnibus doing the most regular service throughout the 5 months' duration of the Milan exhibition will be awarded \$2,000. Two Serpollets, one Fiat and another Italian omnibus covered in gallant style 70 miles of road as a preliminary test.

AUTOMOBILE DEVELOPMENT

The American Simplex



LAST July the Simplex Motor Car Co., of Mishawaka, Ind., announced the completion of its first car, designated the American Simplex. The machine is characterized by a two-cylinder two-cycle motor of 40-horsepower, with a bore of $5\frac{1}{2}$ inches and 5-inch stroke. The cylinders are vertical and water-cooled. Other features are multiple disk clutch, sliding gear transmission carried on the back axle, propeller shaft without universal joints, three-point spring suspension, motor and gearset carried on one frame and body on another, and double mufflers. Since July the car has been in constant service, with a good record to its credit.

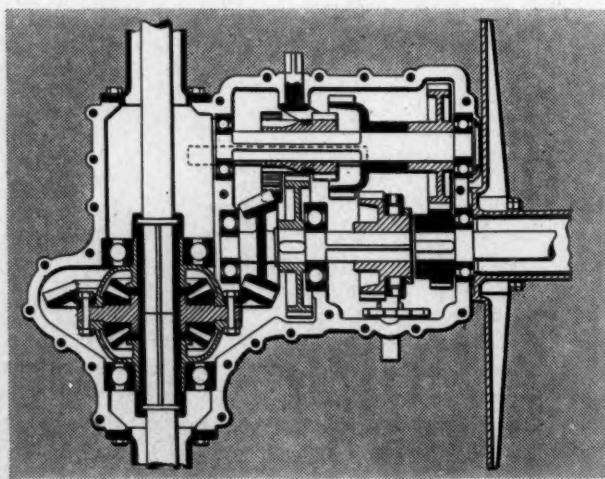
The motor was designed by E. J. Guilick, who also designed the entire machine and who is an inventor of several of the interesting features. The two cylinders are formed in a single casting, with their heads and waterjackets formed integral. The waterjacket portion is stiffened by several internal vertical partitions between the jacket and the cylinder wall, the partitions being so distributed as not to interfere with the water circulation. The mixture enters on the three-port principle, passing from the carburetor into the crankcase on the right side. From the crankcase it is conducted by passages in the right side of the cylinders to the combustion chamber. The exhaust ports are on the left side. Inside of the crankcase space is minimized in order to attain a pressure of from 7 to 8 pounds for forcing the mixture from the case into the combustion chambers. In this space reduction problem the base of the case has been restricted wherever possible, conforming as near as possible to the size of the crankthrows. As in all two-cycle motors, it is divided into two gas-tight compartments, one for each cylinder. In the problem of still further reducing crankcase capacity large aluminum weights are attached to the crankthrows, these weights and the crankthrows forming complete disks on the shaft. In this way the unoccupied space

is practically at a minimum, room being for the oil level in the base. The mixture entering from the carburetor is almost entirely confined to that portion of the cylinder beneath the piston, but even this space is curtailed by the use of pistons 8 $\frac{1}{4}$ inches in length. The general custom of using stuffing boxes on the crankshaft bearings for preventing the escape of mixture has been eliminated in this motor by the use of very long bearings for the shaft. The shaft is a hand forging of nickel steel, made with a $\frac{3}{4}$ -inch hole through the center. All bearings have a diameter of 2 inches and the length of those in front and middle is $4\frac{1}{2}$ inches and that of the back one, adjacent to the flywheel, $5\frac{3}{8}$ inches. Bronze constitutes the metal in all three of the bearing boxes. In many two-cycle engines the exact shape and size of the combustion chamber is determined by experiment, but the inventor of the Simplex has introduced the indicator diagram, determining solely the proper design by the results obtained by these diagrams. To those unfamiliar with these diagrams it is sufficient to state that they show the

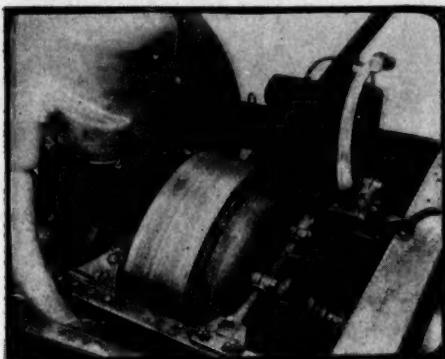
pressure in the cylinder at every portion of each stroke, showing how rapidly and to what height it rises under compression, how high it ascends during the explosion and how rapidly it falls to atmospheric pressure in the exhaust. By this method it is possible for the inventor to attain results not reached by the ordinary experiment, and to this the maker attributes the high motor rating of 40 horsepower, which figure has been repeatedly shown on the brake test. The compression gained before explosion is 75 pounds. The interior of the cylinder heads are domed on the inlet side only, the curve of the head on the exhaust side being bevelled so that the inlet gases are directed downwards. In this way the contour of the chamber corresponds as nearly as possible to the natural direction of flow of the entering gases.

Having secured the proper crankcase compression, and the best shape of combustion chamber, the location and size of the exhaust and inlet ports received attention. These ports are on opposite sides of the cylinders and the exhausts are the larger, having an area of 3.82 square inches, whereas that of the intakes is but 2.75 square inches. Both are alike in that they are divided into two ports by the presence of a vertical bridge partition, which, in the case of the exhausts, is $1\frac{1}{2}$ inches wide and has a central space for water circulation. The exhaust port openings are considerably longer vertically than those for the intake gases, the exhausts having a length of $1\frac{1}{8}$ inches with the intake but $\frac{5}{8}$ -inch. From this construction it is evident there is a longer exhaust period than intake. The bypass passages from the crankcase to inlet ports are covered by large plates secured by six nuts.

Of the remaining portions of the motor little out of the ordinary is seen. The top of the crankcase supports the cylinders, the bottom part serving solely as an oil reservoir and forming a part of the chamber for the compression of the mixture; the connecting rods, Parsons bronze casting made in H-section, have split white brass bushings at the piston ends, with brass shims for simplifying the tightening of the bearings; at the crankshaft end these rods carry the usual cap secured by four bolts, the bushings, as in the other case, carrying shims; pistons are of soft gray iron, flat on the top except for



SPEED CHANGE GEAR ON AMERICAN SIMPLEX



CLUTCH AND CASE ON AMERICAN SIMPLEX

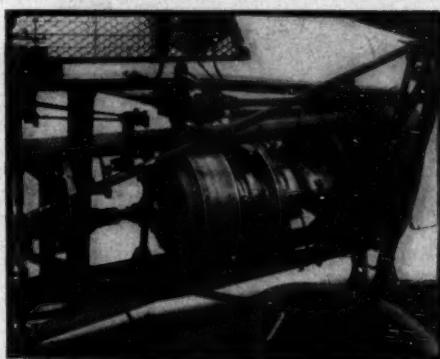
the baffle plate for deflecting the inrushing gases to the top of the combustion chamber, but a feature in them is the use of internal ribs for cooling purposes, the inventor hoping to draw off much of the heat by the presence of the cold mixture contacting with these ribs; piston rings are in two groups, one of three at the top of the piston and another of one at the base—all rings are of the eccentric, step-joint variety ground to size and specially finished; hollow, hardened steel wrist pins, $1\frac{1}{8}$ inch in diameter, and fixed against rotation in the connecting rod, unite the pistons to the connecting rods; a 92-pound flywheel is secured to an integral flange on the crankshaft, and the motor complete weighs 287 pounds, 92 of which is in the flywheel.

Compactness appears in the grouping of the governor, distributor and water pump on a single vertical shaft at the front of the forward cylinder and driven by gear off the front end of the crankshaft. All of these parts are neatly housed in an aluminum casing. The governor is on top, being accessible by removing a small aluminum cap. Below it is the distributor and at the bottom is the pump. A jump spark system is employed, current for it being provided by a storage battery and dry cells. On the dash is a single vibrating coil, and from this to the distributor and thence to the plugs is the current course.

To aid in starting without cranking the motor, a second set of contacts is furnished in the distributor. A push button brings this set into use, and by it a spark can be given in each cylinder of sufficient strength to fire the charge. With the release of the push button the second contacts are disconnected.

In lubricating a belt-driven Dodge oiler, with seven feeds, is relied upon. Of its seven feeds three go to the crankshaft bearings, one to each, two lead to the cylinders and the remaining pair has connections with the two parts of the crankcase. The usual custom of grooving the bearing bushings for the conducting and distributing of the oil throughout the bearing is not used, the only arrangement for such being a small gauge, $\frac{1}{8}$ -inch long, in the center of the bearing. In the crankcase little oil is required and to make this sufficient for the pistons and the splash the bottoms of the connecting rods carry small scoops which pick the oil up once in each revolution. Cooling is by standard water connections, coupled with a standard vertical tube radiator. The pump is so designed that, should it become inoperative, it will not interfere with a thermo-syphon system of circulation. The pump is a four-winged spiral made 3 inches in diameter and with $1\frac{1}{2}$ -inch pitch. Stuffing boxes are used in the top of the pump casing.

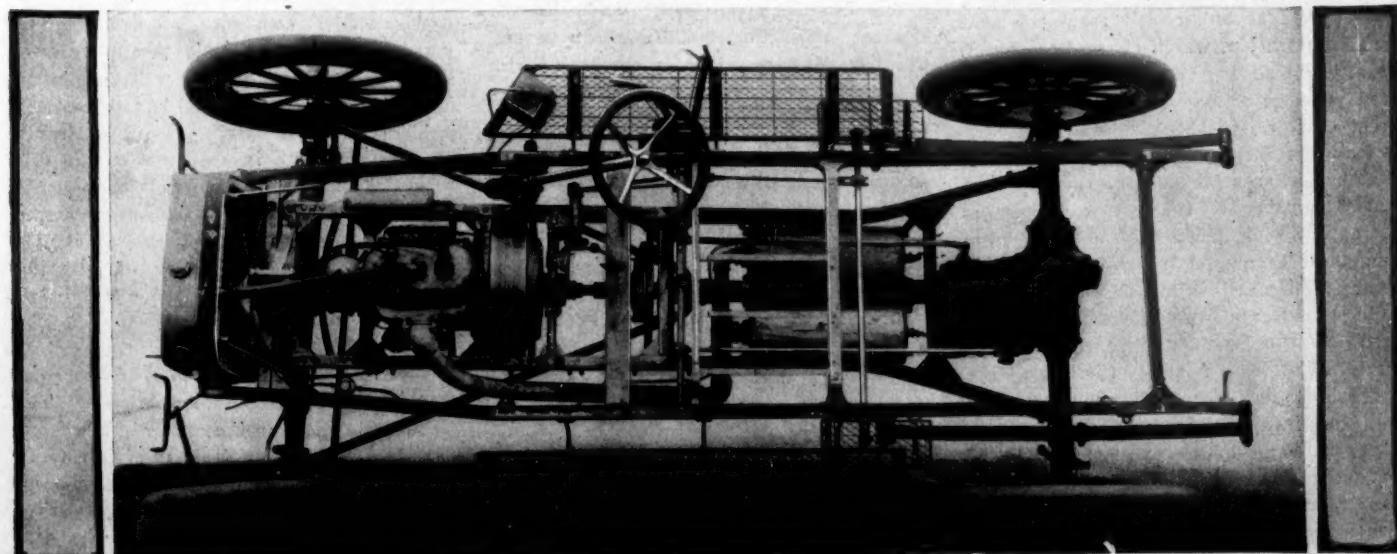
Apart from the motor the unique frame design and the transmission contain in themselves many points of interest. The top view of the chassis reveals these. Two distinct frames are used. The larger and outer one, termed the main frame, carries the body of the car and the radiator. At the rear it is supported on a pair of long, semi-elliptic springs and at the front it has a crosspiece behind the radiator, and through this crosspiece has a double support on the front end of the subframe, the subframe being the inner one, on which the machinery is carried. A point to note in the main frame is that the side pieces



SUB-FRAME AND REACHES

are straight from front to rear except where they are inclined inwards when nearing the radiator, their width at the front ends being that of the width of the radiator. On this frame is carried the steering gear. Passing to the subframe—that carrying the motor: It is carried in front on a cross spring of semi-elliptic type, placed directly above the front axle, a scheme used on Packard cars up to the present season. To the top of this spring is pivoted the center of the front cross-piece of the subframe. In this frame are two channel steel pieces of comparatively narrow width, so narrow, in fact, that the short motor arms rest directly on them. When a short distance in front of the back axle these pieces separate slightly and have a rigid connection with the back axle. Thus the entire machinery plant at the back is carried on the axle, the pneumatic tires being alone responsible for the prevention of jar; but at the front a spring suspension is between the machinery and the ground, as well as the pneumatic tires of the front wheels. Suitable crosspieces are used in both frames; gusset plates for reinforcement are numerous. By pivoting the subframe on the top of the front cross spring a three-point suspension is gained and should one of the front wheels be higher than the other the level of the body is not molested.

Following closely on this general resume



PLAN VIEW OF THE CHASSIS OF THE AMERICAN SIMPLEX TWO-CYCLE CAR



LITTLE RUNABOUT MADE BY THE SUCCESS AUTOMOBILE MFG. CO.

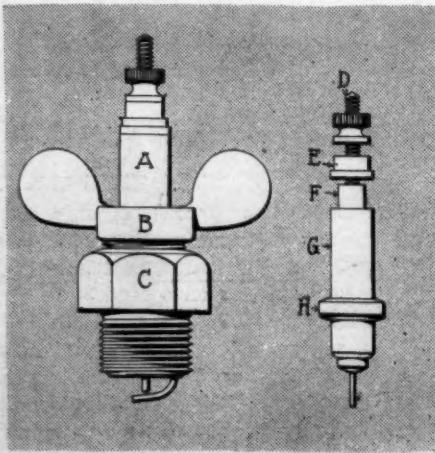
of the running gear is the study of the transmission, the point in which is the carrying of the multiple disk clutch in the flywheel and connecting it by a long propeller shaft with the gearcase on the back axle. In this shaft are no universal joints and the shaft operates in a large casing, which is rigidly secured to the frame; thus, no matter how much the back springs of the car are going up and down, the straight line of drive from the flywheel to the gearcase is never altered. With every up and down movement of the front spring the entire subframe with its motor falls or rises, the back axle being the pivot on which it swings. This means a constant tilting up and down of the axle, but no alteration of the line of drive. The clutch has seven disks, three leather-faced steel disks secured by three studs to the flywheel and four others attached to the square forward end of the clutch shaft. The three on the flywheel interact between the other four, the two center ones of which are uncovered steel plates and the two end ones soft gray iron. The clutch does not operate in oil, owing, of course, to the use of the leather facing on three of the disks. To the rear of the clutch is a jaw coupling with the front end of the propeller shaft. The gearset is best understood from the sectional illustration, which shows it to be of the straight sliding type, giving three forward speeds and one for reversing, with direct drive on the high speed. The case enclosing it forms a unit with that housing the differential and also forms the central housing of the rear axle. It is a stout casting made throughout from manganese bronze of 80,000 pounds to the square inch tensile strength. The case is divided horizontally in line with the bearings, the top part carrying a small inspection plate. Within the case the clutchshaft has a square ending behind the pinion for driving the countershaft. The front end of the mainshaft of the set has no bearing in the rear end of the clutchshaft, as is generally the case. Two reasons led the inventor to dispense with this, the first being the difficulty of

oiling such a bearing and the second the placing of a Hess-Bright bearing about the middle of the shaft and close behind the first gear on it. Consequently, when driving on the high speed, the two shafts are connected by slipping the sliding gear over the square end of the clutchshaft and in which case a bearing is not needed, and when the sliding gear is meshed with the first gear on the countershaft it is so close to the central bearing as not to occasion unnecessary strain on the shaft. Hess-Bright bearings are used throughout, even on the reverse idle shaft. The divided back axle has its bearing on long Hyatt rollers at each end, but in the center is carried on Hess-Bright races. The differential is of the bevel type.

The regular brake is on the driveshaft, at the rear of the clutch, and for emergencies there are expanding sectors of bronze operating within malleable iron drums on the hubs of the back wheels. The latter are lever-applied, whereas the former's application is by pedal. The use of either set disengages the clutch. Other points in the running gear are: Wheelbase, 106 inches; tread, 56 inches; weight, 2,450 pounds, and wheels, 34 by 4 inches.

CHARTER'S SPARK PLUG

The Charter spark plug, made by the Charter Mfg. Co., 303 Dearborn street, Chicago, consists primarily of three parts:



CHARTER'S SPARK PLUG

A, the core portion, which contains the central electrode; B, a thumbnut, by which the core is held into the part; C, which threads into the head or other part of the cylinder. Owing to the nut B, it is possible to remove the core for cleaning purposes without taking the part C out of the cylinder. One part turn of the thumbnut is sufficient to loosen the core or tighten it in position; by its use a wrench is not needed. In the core part, D is the metal core or central electrode, which extends from one end to the other and along which the electricity enters the cylinder. The lower end of D rests but a fraction of an inch above the curved iron pin, the second electrode, shown on the bottom of the part C of the plug; F is a heavy mica insulation which is wrapped around the core D and extends from the nut B, which holds it in place without a joint or break to the end of the core; G is mica washers put over the insulation F by hydraulic pressure and which act as a reinforcement to F; and H is a ground joint which aids in making the plug gas tight when in position. All metal portions of the plug are polished brass and joints are ground to fit.

SUCCESS RUNABOUT

By selling its little machine for less than any other automobile now on the market, the Success Automobile Mfg. Co., St. Louis, Mo., sets a low-water market price for the present season, which, on more than one occasion, has been electrified by the announcement of low-priced cars. The Success is little more than a motored horse buggy, and that without very extensive alterations. However, in this sphere it shows the tendency of bringing out a light and cheap machine that will have attractions for the farmers and certain city classes. The Success is a little 3-horsepower vehicle with a single cylinder air-cooled motor attached to the right side of the body, entirely on the outside. The motor has a bore and stroke of $2\frac{1}{2}$ and 3 inches, and is of the typical motor cycle variety, with its self-contained flywheel and compact carburetor. The transmission from this is through a two-speed and reverse planetary transmission and thence by chain to the left rear wheel, it being the only driving wheel, a feature of construction doing away with the differential and any style of live axle. A still further cleaving to horse-drawn machines is evident in the pivoted front axle instead of the introduction of steering knuckles. While unique, the steering has so far proven practicable and capable. The common single buggy axle is arranged to receive the usual plain boxes of the common Sarven pattern wood wheels. The usual fifth wheel on the center of the front axle is used. A vertical steering column carries a pretentious hand wheel and on the bottom of the column is a sprocket over which passes a short piece of chain, which connects with rods connecting with

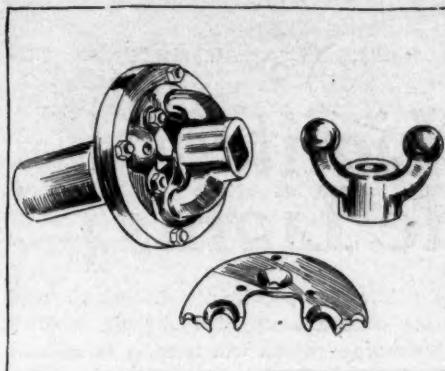
the ends of the axle near the road wheels. The system is somewhat similar to that used on traction engines, only of lighter construction. In the rear of the sprocket on the base of the steering column is a flat spring which bears against the chain on the sprocket, holding it there and serving as a steering gear lock, so that the road wheels when placed in any direction will tend to continue in that direction and so accomplish a result identical with that of an irreversible steering gear. The road wheels are 37 inches in diameter in front and 41 inches in the rear, or 49 inches in front and 44 in the rear, if desired. Oval steel tires, either $\frac{3}{4}$ or 1 inch in width, are used. Rubber tires are furnished at an extra cost. The wheelbase is 62 inches, weight 400 pounds and the speed from 2 to 25 miles per hour. In the selection of material, steel and phosphor bronze are used in most of the parts in the car where exceptional wear and load strains are encountered. The control of the motor is from the right end of the seat.

HARTFORD'S NEW JOINT

A motor example of "old wine in new bottles" appears in the latest type of universal joint manufactured by the Hartford Automobile Parts Co., Hartford, Conn., the joint, the Hartford, being primarily designed for use in the propeller shafts of shaft-driven machines. Neither a center block, cross nor spider is used. Taking their place are two double arm driving yokes, each arm ending in a spherical ball. These ends fit into sockets at an annular ring. This ring is made in halves and each half is again divided into halves, making in all four exactly duplicate parts for each ring. One of these four parts is shown. This annular ring contains sockets for receiving the ball ends of the yoke arms, the sockets being part in one half and part in the other half of the ring. The halves of each half of the ring are assembled at right angles and the opening to the sockets is sufficiently slotted to permit of an angular movement for the neck of the ball of 15 degrees from the normal. The four parts of the ring are, after the balls are in the sockets, bolted into position together and, surrounding the ring, is a steel casing making the joint dustproof. This casing is held in position by a steel ring shown in the assembled view of the joint, and which serves as a reinforcement. The claim of the maker advanced for this particular style of joint is the use of ball ends on the arms, the claim being that the friction occasioned by a spherical bearings is less than that of cylindrical styles. All portions of the joint are carefully machined to size from Billings & Spencer forgings, and when complete the joint is oil and dust tight.

A LENGTHENED AUTOMOBILE

A good example of lengthening wheelbase is illustrated by the accompanying illustration of a Locomobile car owned by



NEW HARTFORD UNIVERSAL JOINT

Jesse B. Cornwall, of Redding Ridge, Conn. The original car was a 1904 type D machine with 86-inch base. The base was increased to 106 inches, the body correspondingly altered and other necessary changes made, the entire expense being \$270. The entire work was done by a carriage builder, who lengthened the frame and did the other work. Perhaps the greatest evidence of the lengthening is in the extra long chain covers seen on the rear end of the running boards. The side entrances are extra wide, ample room is had in the tonneau and the general appearance of the machine has not been impaired by the lengthening process. As a matter of fact, the rebuilt car has the appearance of any 1906 machine.

USES CRUDE OIL

H. L. Palmer, of Cleveland, who has been in the automobile business in that city for some time as head of the Palmer Automobile Co., claims to have perfected a satisfactory oil engine for automobile service. It uses crude as well as refined oil, and is claimed to be perfectly satisfactory with the heavy raw product. The engine is a single cylinder, with 6-inch bore and 5-inch stroke, and is claimed to develop 20 horsepower. An insulating material is used between the combustion chamber and the outer walls of the cylinder which, it is claimed, eliminates the necessity of artificial radiation either by air or water. Several tests of the engine

were made in Cleveland recently before automobile manufacturers who are said to have secured an option on the device. The inventor is unwilling at this time to go into a detailed description of the device.

MOTOR CAR LITERATURE

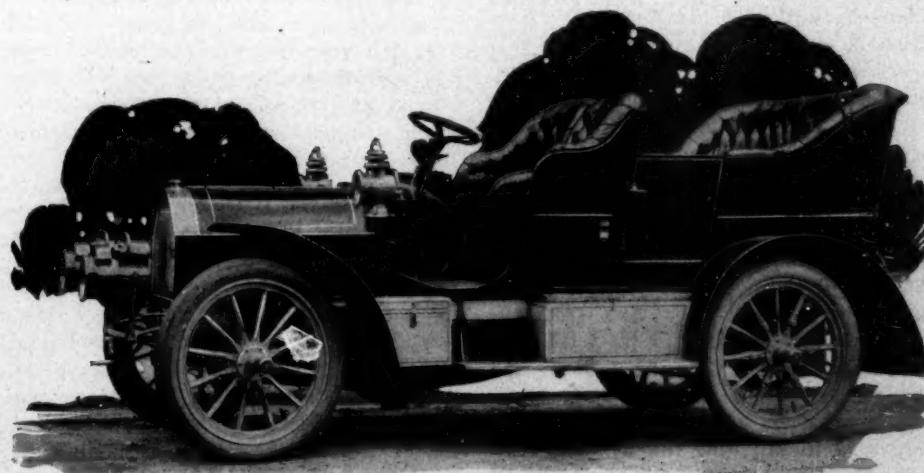
One more firm to use the four-page folder is the Peerless Motor Car Co., Cleveland, O. It shows on a tied-in sheet the four styles of bodies used on its cars. The inner pages of the folders tell of the design and 1,000-mile tests of the car.

Four styles of electric vehicles built by the Columbus Buggy Co., Columbus, O., are treated in a neat catalogue now in the mails. These styles are: Runabout with folding top, enclosed brougham, surrey touring car and limousine, the last a novel style of body for electric machines.

"Complete Motor Car Laws of the United States," by the Mora Motor Car Co., Rochester, N. Y., is an 8-page booklet with a scheduled synopsis of the motor car laws in thirty-six states. Information is given on registration, fees, number plates, lamps, non-residents, speeds and penalties.

Illustrations only is the sum total of a booklet now in circulation and which comes from the American offices, 1743 Broadway, New York city, of the English Daimler cars. The English Daimler Co., at this address, is the exclusive American distributor. Besides various body styles, the motor and gearset are illustrated.

Matthew Bender & Co., Albany, N. Y., announce for publication early this month "Huddy on the Law of Automobiles." It is a text book on a subject that is of growing importance. It contains a comprehensive and accurate presentation of the common and statutory law governing the operation of motor vehicles in the United States and England, including the decided cases concerning the automobile and motoring. It discusses questions which are apt to arise and will also be an accessible, complete and up-to-date compilation of all the automobile enactments of this country and England.



A 1904 LOCOMOBILE MADE INTO A 1906 MACHINE



Legal Lights and Side Lights

MIXUP OVER NUMBERS

Minneapolis and St. Paul police authorities are sadly mixed up in their efforts to enforce the speed ordinances of the two cities against scorching motorists. The trouble all comes from the change in Minnesota's licensing laws, which gives the licensing power to the city authorities, instead of to state boiler inspectors. Under the new plan, licenses begin with No. 1, in the office of each city or village clerk, and run continuously. The original license system of Minnesota apportioned the first 499 numbers to St. Paul, and the next 599 to Minneapolis. Owners of these state licenses are secure, under a ruling of the attorney-general, from molestation, and continue their numbers. Now Minneapolis is issuing numbers from 1 up, and police authorities find it impossible to distinguish a St. Paul car from a new Minneapolis machine. The proximity of the two cities results in the continuous use of cars between the towns, and over the general boulevard system which connects them. There seems to be no way of distinguishing the cars without starting again to number them under a particular city system; and the owners are fighting any innovations in this line.

READY FOR NEW LAW

The chief commissioner of the automobile department of New Jersey, Assistant Secretary of State J. R. B. Smith, has completed his arrangements for carrying into effect the provisions of the Frelinghuysen law, which passed the legislature last session and which goes into effect on July 1. Three thousand of the 17,000 automobileists who will register in the state have already secured their new registry numbers and fully 2,500 chauffeurs have been licensed, either at Trenton or at the sub-agencies at Jersey City, Newark, Phillipsburg and Camden. To accommodate the expected rush of applicants additional agencies have been established at Branchville, Seabright, Freehold, Plainfield, Bridgeton, Rahway, Edgewater and Hackensack, and if these prove insufficient others will be opened where necessary. An idea of the aggregate receipts of the new department can be had from the statement that one-sixth of the total yearly business has already been done, and the amount turned into the state treasury is in excess of \$11,000. It is therefore safe to say that the new law will bring in at least \$65,000, all of which will be devoted to the repair and improvement

of public roads, under the direction of the state commissioner of highways. With this money—which will increase in amount yearly—many miles of road can be improved and repaired annually, and doubtless in years to come the farmers, as they drive to and from market over the excellent highways, will rise up and call the automobile blessed. Commissioner Smith is quoted as saying: "A strict compliance with the provisions of the new law will be insisted upon. Persecution of the automobileists will not be permitted. We realize the great majority of motor car owners and drivers are law-abiding; the small minority who are otherwise disposed will find us prepared. First we will try moral suasion and, if that fails, prosecutions and revocation of licenses will be in order. The law must be obeyed."

BARRED FROM PARK ROAD

One road in Genesee Valley park, Rochester, N. Y., known as the forest road, is to be closed to automobiles hereafter, according to a rule just passed by the Genesee Valley park committee. The forest road is one of the narrowest drives in the park. It is also one of the most beautiful, with its winding curves and pretty scenery. Of late there have been many narrow escapes there from serious runaway accidents, horses being frightened in the narrow drive when meeting the automobiles. It is hard for vehicles to pass on this road, especially if a horse is jumping about with fright at an automobile. Complaint was made a short time ago that automobileists were using the park roads for speedways, putting drivers of horses in danger, as well as pedestrians and bicyclists. An effort was made to apprehend some of the offenders, but no arrests have been made as yet. It is said that the new rule does not result from the complaints of speeding, as automobiles moving at even a slow rate of speed have frightened nervous horses on the narrow forest road through the park.

SYMPATHETIC JUDGE

Magistrate Steers, of Brooklyn, has placed himself on record as being in sympathy with motorists arrested for violating speed laws that are ridiculously slow.

"The large majority of automobileists that take the run along the Ocean parkway, for instance," said the judge, "go considerably over 10 miles an hour. Speaking from experience, the automobile that is going at that rate is doing little more than crawling. Within the populous part

of the city, the law should limit automobiles to a very slow rate of speed, but along such highways as the parkway, I think that there should be some leniency shown. If the police arrested every person who violates the speed law on the Ocean parkway, they would arrest nearly every automobileist that goes over that famous highway.

"The judges down at special sessions do not realize the true condition of affairs. I intend very soon to invite them to take a trip with me in my automobile along the parkway. We'll take a stop watch along and time ourselves over a measured course. It will then be seen that, although we are little more than crawling along, we are really going over the legitimate 10 miles an hour. My views do not make me in any degree lenient upon those who are arraigned before me for overspeeding, but they have my sympathy."

WANTS ALCOHOL ONLY USED

The charge that "Philadelphia is slow" has been refuted so often it hardly seems worth while to pile up evidence to the contrary. Yet in justice to that much-maligned municipality it is only fair to call attention to the fact that the president had hardly attached his signature to the free alcohol bill before one of the Quaker city's legislators, Common Councilman Murray, introduced an ordinance requiring all automobiles operated within the city limits, electrics, of course, excepted, to use denatured alcohol for fuel. The bill, if passed, is to take effect January 1 next, and a penalty of \$10 is provided for each violation of the measure, which was referred to the committee on boiler inspection. It cannot be said that anyone in Philadelphia takes the ordinance seriously, with the possible exception of Councilman Murray, whose olfactory nerves seem peculiarly sensitive to the fumes which trail in the wake of the gasoline automobiles.

CLEVELAND CRUSADE

Cleveland police authorities and the judges of that city are becoming more and more vigorous in their efforts to punish those who violate the speed ordinances or those who travel abroad without numbers. Not satisfied with mounting some of the bicycle policemen on motor bicycles, the police authorities have impressed one of the municipal automobiles, a good, speedy one, and have plain clothes policemen out cruising around in this machine to catch the unwary. It is even charged that they have the trick of scorching past a driver as if to invite him to come on. Then if he accepts the invitation and goes a little too fast, he is gathered in. Judge Whelan and Judge Fielder, of the police court, are going after offenders in the hammer and tongs fashion. No more are first offenders reprimanded and let go with a small fine. The fines imposed nowadays are for \$25 and \$30 and costs and even

more for old-timers. The fines are about in proportion to the speed which the machine was said to have been going. Becoming wise to the situation the complaining policemen are helping the city by exaggerating the rate of speed.

TAX KILLS A LINE

By a recent ruling of the legal department of Nashville, Tenn., each of the fifteen cars that were formerly operated by the Union Transportation Co. in the city for transporting passengers to and from various points is liable to a privilege tax of \$48 each as omnibuses. The ruling has had the effect of stopping the use of the cars. The Union Transportation Co. was organized by the colored people of the city to run in opposition to the street cars on account of the hard feelings brought about by the "Jim Crow" law that was passed by the last legislature, and for a time the line did a thriving business. The fifteen cars used were purchased from the World's Fair Automobile Co. at St. Louis.

CANADIAN RESTRICTIONS

Among the laws passed by the Ontario legislature at the session just ended is one of a drastic nature regulating automobiling in Ontario. The new law provides that numbers are to be 5 inches long on front and back, and no number than that issued by the provincial secretary can be carried on the car. In case of accident the onus of proof is on the automobilists. They must slow up on approaching horses or vehicles, stop if signaled and render help if asked. For

violation of the regulations or for riding on a bet the penalty is \$50 for the first offense, \$100 for the second, and not more than 1 month in jail for the third. If there are three convictions within 1 year it will cancel the permit, and no other will be issued for 2 years. Officers may arrest without a warrant, and may detain the car until the case is settled. The fees on American automobiles have been increased from \$2 to \$10.

TO WAR ON CONSTABLES

At the next meeting of the Atlantic City Automobile Club an effort will be made to enlist the co-operation of the Automobile Club of Philadelphia and other similar organizations in a proposed war against the country constables, who are working the "hold-up" racket to the limit. Scarcely a day passes that some party of automobileists, traveling to or from the famous resort, is not stopped on the road and compelled to "give up." The nuisance has become so pronounced that many threats to "cut Jersey out in future" have already been heard. This hits the pocket nerve of the Atlantic City hotelkeepers, for the automobile people are good spenders and desirable customers, and appeals have been forwarded to Trenton to have the new automobile department officials compel the country constables to use a little judgment.

ALL MUST CARRY LIGHTS

One of the things the Atlantic City Automobile Club proposes discussing at its next meeting is a remedy for the defect in the law which allows horse-drawn vehicles to use the roads at night without carrying

lights. Several badly battered cars have arrived at the short during the past week, having sustained damage from collisions.

WANTS NET FENDERS

City Councilman William J. Leroux, of Toledo, O., wants all automobiles in that city to be provided with net fenders, so that, when a moving machine strikes a "feller," it will hit his legs and not his "receptacle for food." The councilman is preparing an ordinance to be introduced before the city body, and hopes to compel all owners of automobiles to have cow-catchers, constructed of strong nets, on all machines in the city. The speed limit will be 10 miles per hour, and each machine will be compelled to carry a number. Mayor Brand Whitlock and the board of public safety desire the council to provide a fund for the purchase of six motor cycles for policemen to catch those who violate the speed ordinance.

EXTENUATING CIRCUMSTANCES

Judge Cochran, in the city court of Wilmington, Del., last week, refused to fine Ernest E. Kelly, arrested on the charge of fracturing the automobile speed ordinance. Mr. Kelly proved he had a party of women and a baby in his car, and that he had "hit 'er up" to escape a rapidly-approaching storm. In commenting upon the case, the judge remarked that Mr. Kelley was justified in trying to save his passengers from a wetting, and further said a physician hurrying to the bedside of a patient should not be punished if he exceeded the speed limit—providing he used reasonable caution.

CONGRESS TAKING INTEREST IN GOOD ROADS BILLS

Congress is evincing considerable interest in Representative Rhodes' bill to establish a national commission of public highways. The object and purpose of this commission is to co-operate with the several states and territories in the construction and improvement of the public roads, and to bring about as far as practicable a uniform system of construction and improvement of the public roads throughout the United States. The commission is to consist of three persons, one of whom is to be appointed by the president of the United States, who shall have practical knowledge of road engineering and construction, while the other two members shall consist of the secretary of agriculture and the postmaster-general. The postmaster-general is to be president of the commission, while the commissioner to be appointed by the president of the United States shall be the secretary.

The bill then goes on to provide that the legally constituted authorities of the several states and territories, under whose jurisdiction are placed the public roads, on having expended a given sum of money subsequent to January 1, 1907, in the

establishment or improvement of the public roads, shall file in the office of the auditor of their respective states or territories, a duly certified and authenticated statement of all moneys so expended. When any state or territory shall make application to the commission for national aid for the construction or improvement of the public roads therein, according to the rules and regulations authorized by the commission, it shall be the duty of the commission to immediately appropriate a sum of money equal to the amount expended by such state or territory in the establishment or improvement of its public roads within 12 months prior to the date of the application. The provision is made that the sum appropriated to any one state or territory shall not exceed the sum of \$500,000 in any one year after January 1, 1907, and that all moneys appropriated shall be paid by the commission to the various legally constituted authorities of the several states and territories having jurisdiction over the public roads, under such safeguards as may be provided by the national commission. The term "public road or public roads"

shall be construed to mean any road or roads legally established under the laws of the several states and territories or any post-road of the United States, and shall not be deemed to include the streets and alleys of any city.

The bill carries with it an appropriation of \$50,000,000 for the purposes of the act, the said appropriation to be available not to exceed \$25,000,000 a year.

National aid in the building of good roads was the subject of a very able speech made in the house of representatives recently by Representative Sulzer, of New York. He called attention to the fact that while the house was considering the sundry civil appropriation bill, which legislates out of the treasury millions and millions of dollars annually of the people's money for all sorts of purposes and conditions of things—except the one he was talking about—he desired to bring the attention of the members of the house to a matter which he considered of much moment to all the people, and of far-reaching consequence to the general welfare of the entire country—the construction of good roads as an aid to national progress.

Among the Makers & Dealers

Picard Returns—A. L. Picard, recently manager of the Rainier Co.'s branch at Philadelphia, has returned to the headquarters of the Rainier people in New York.

Bidwell at the Head—Announcement is made of the appointment of George E. Bidwell as general manager of the Autocar Co. Mr. Bidwell was once prominent in the cycle trade and also was collector of the port of New York. After that he was president of the La Franche fire engine manufacturing concern.

Uncle Sam Using Them—The new battleship Georgia is equipped with a Warner tachometer for testing the revolutions of engines of the battleship. The device is similar to the regular auto-meter made by the Warners. The company will also make for Uncle Sam an instrument that will register any kind of a wind or breeze that travels as slowly as 2 miles an hour.

Tires for Ford Runabout—One of the largest shipments of automobile tires was made from Akron, O., for Detroit, Mich., the Firestone Tire Co. shipping the first installment, amounting to a full car load, of mechanically detachable pneumatics to the Ford Motor Co. These tires are for the Ford four-cylinder runabout. It is asserted by the Firestone company that the Ford order is the largest bona fide order, with shipping dates designated, ever placed by any concern. Specifications are given for lots of 2,000 sets at a time.

New York After 25 Per Cent—Discounts still form the absorbing topic of the New York trade, which insists that the present rate of 20 per cent is insufficient in view of the heavy expense entailed in the conduct of business in this city by exorbitant rents and the big outlay demanded by abnormally large and strenuous competition. The demand is for 25 per cent, and so insistent is it that at their meeting last week the governors of the New York Automobile Trade Association decided to call a mass meeting of the members at the Empire hotel for discussion and action.

Hyatt Spreading—The Hyatt Roller Bearing Co. has just broken ground for a three-story addition, 75 by 100, to be erected adjoining its present machine shop. Although it is less than 2 years ago that it added an addition 75 by 150, two stories high, it has already outgrown its present facilities. Improved methods in the manufacture and finishing of the bearing have made necessary the design of a large variety of special machines and fixtures and it is to make room for this large volume of improved machinery that this new addition is required. It is proposed in the future to grind all parts of



DRIVING UP IOWA'S STATE CAPITOL STEPS

Hyatt bearings and special machinery. The new building will be ready for occupancy August 1 and by that time the company's output will be increased at least 50 per cent.

Bretz in New Role—Severing his connection as sales manager with the Corbin Motor Vehicle Corporation, J. S. Bretz has allied himself in a similar capacity with the Hartford Automobile Parts Co.

Lands the Leader—The Gibson-Short Cycle & Auto Co. has obtained the agency for Indiana, with the exception of five counties, for the Leader. The company now has the agency for the Leader, Marion, Reo and Ford and contemplates enlarging its garage before the end of the season.

Aerocar Business—Percy Owen, eastern sales manager of the Aerocar company, has appointed the Motor Vehicle Co., of Newark, agents for Union, Essex, Middlesex, Somerset, Monmouth, Sussex and Morris counties in New Jersey. He says he expects to close this week Aerocar agencies at Bridgeport, New Haven, Poughkeepsie, Peekskill, Brooklyn and Jersey City.

Four-Port Engine—Commodore F. M. Underwood, of the Toledo Motor Machine Co., of Toledo, O., has just perfected a four-port gasoline engine of the two-cycle type. All ports are positive, controlled by piston, no valves being needed. The inventor claims that any carburetor will work on the four-port device. It will be built by the Toledo Motor Machine Co., both for automobiles and marine craft. The new engine is much lighter than other

engines, the 2-horsepower four-ports weighing 30 pounds, the four-cycle, 20-horsepower four-ports weighing between 190 and 200 pounds. Manufacture of the engines has started.

Henry J. Hill Changes—Henry J. Hill tendered his resignation as master mechanic of the Electric Vehicle Co., Hartford, a few days ago and upon his leaving the employ of the company he was presented with a handsome thirty-second degree Masonic charm. Hill had been connected with the company for 10 years.

Cincinnati in the Game—George P. Altenberg is back of an enterprise which contemplates erecting an automobile factory in Cincinnati. He has in mind securing a large building on Spring Grove avenue, with a floor space of 40,000 square feet. This will be only a temporary arrangement, it being planned to have the permanent plant in Norwood, where 5 acres of land will be secured.

Takes on New Lines—T. F. Russell, who conducts a manufacturers' agents business at 22-24 Lincoln street, Boston, has recently made arrangements with the National Sales Corporation, of New York, factory sales managers for Connecticut coils, Geegee storage batteries, Soot-Proof plugs and Dodge lubricators, whereby he will look after the sale of these appliances in Boston and the surrounding territory.

After Flint Plant—Negotiations for the sale of the plant of the defunct Auto Brass and Aluminum Co., of Flint, Mich., to the Peerless Heater & Valve Co., of Detroit, are almost completed. Remission of taxes for 10 years has been asked of the common council by the prospective purchasers and the council has complied. In case the Detroit parties purchase the plant their business will be removed to Flint. C. J. O'Hara, of Detroit, who recently purchased the plant at bankrupt sale, is conducting the negotiations.

Will Help the Trade—The New York Motor Club directors, at their meeting last week, appointed a committee to devise a system to be used by the club's technical committee in overseeing tests to determine the reliability and efficiency of automobiles and automobile appliances. It is the idea to establish a regular department, similar to one conducted by the Automobile Club of France, which will act as official observer for either an individual or an automobile manufacturer for any contest where it is desired to prove the superiority of any car for a certain purpose. It will also provide an opportunity for inventors to have their devices thoroughly tried out under expert supervision without being compelled to wait

for such set contests as the club's economy test or the 2-gallon efficiency contest of the Automobile Club of America.

Motor for Plow—The Brennan Motor Co., of Syracuse, is making a four-cylinder 6 by 6 motor for the Iowa Grain Co., to be used in a traction plow. This plow has no wheels, the disks doing the plowing as well as the traction. The company has been using all summer a plow that was similarly equipped and will manufacture the plows for sale.

Darracq Moves—The Darracq Motor Car Co., of New York, is now established at 1989 Broadway, between Sixty-seventh and Sixty-eighth streets, where alterations assuring the Darracq one of the handsomest homes in the city are nearing completion. Deliveries of seven cars were made last week and nineteen more are reported on the ocean en route.

In New Place—The Syracuse Motor Car Co. has completed its moving from South State street, Syracuse, N. Y., to the four-story building at 511-513 South Clinton street. The basement is used for storage and the first floor for an office. On the second floor is the show room and on the third the repair shop. The paint shop is on the fourth floor. The rental business shows an improvement over last year.

Double-Tonneaued Apperson—There was delivered in Chicago this week a double-tonneaued 50-55-horsepower Apperson touring car, the body being a departure from the conventional, the rear tonneau being designed to carry the chauffeur when the owner is driving or else accommodate the overflow. The car will carry eight people and weighs 3,300 pounds. It has a 120-inch wheelbase and the big body, which cost \$1,800, was built by Kimball. The chassis is of the regular Apperson design, the cost of it being \$5,000.

New Orleans' Newest—The new garage and salesroom of the Abbott Cycle Co., of New Orleans, is now in course of construction in Baronne street near Girod. The building will cover an area of 100 by 100 feet, of which 75 per cent will be used as a garage on the first floor, with the repair shops immediately above. Fifty machines will be accommodated at a time in this modern storeroom. The building will be constructed of brick and cement, with an immense number of plate glass windows. This is the first modern and up-to-date garage to be built in New Orleans.

Queer Deal—An automobile owned by Dr. J. J. Bellheimer, of Scranton, Pa., was found by the police Saturday in a west side garage in Buffalo. The proprietor told the officers he bought the machine several weeks ago from a man who said he did not care to keep it. Dr. Bellheimer is said to have shipped the machine to Buffalo to be repaired. He also sent in advance the estimated cost of the repairs, between \$600 and \$700. He awaited the return of the automobile for some time and then investigated and learned that the

machine and the repairer were missing. Dr. Bellheimer is trying to obtain trace of the repairer and the money he received.

Recognizes Reo Man—C. Andrade, Jr., counsel for the Ieo Motor Car Co., has been appointed a member of the municipal explosive commission as a representative of the New York Automobile Trade Association.

Will Move to Buffalo—J. V. Lack, of Paducah, Ky., who was a delegate to the travelers' national convention in Buffalo last week, has arranged to transfer his factory from Paducah to Buffalo. He is president of the Lack Mfg. Co. Mr. Lack has invented an automobile wheel which contains its own springs, it is said, and thus does away with the necessity of equipping motor cars with pneumatic tires.

Nashville's Latest—The Southern Automobile Co., of Nashville, Tenn., changed hands this week, the stock in the company being held by Duncan Kenner and Charles C. Coddington, who will in the future conduct the business. The Southern Automobile Co. has the agencies for the White, Buick, Cadillac, Stanley, Oldsmobile, Franklin and Thomas cars. The new organization consists of Duncan F. Kenner, president; C. C. Coddington, vice-president and general manager; Charles C. Gilbert, auditor, and W. J. Cummins, director.

Plans Big Garage—Plans have been drawn for a new garage building for the Toledo Motor Car Co., of Toledo, O. The structure will be a one-story brick building, L-shaped, and will be located at the corner of Madison avenue and Eleventh street. The building will have a frontage of 55 feet on Madison avenue, with a depth of 175 feet on Eleventh street, and with the exception of the space allotted for the office, the garage room proper will be without a solitary post and contain nearly 10,000 square feet of floor space. The repair and supply departments will

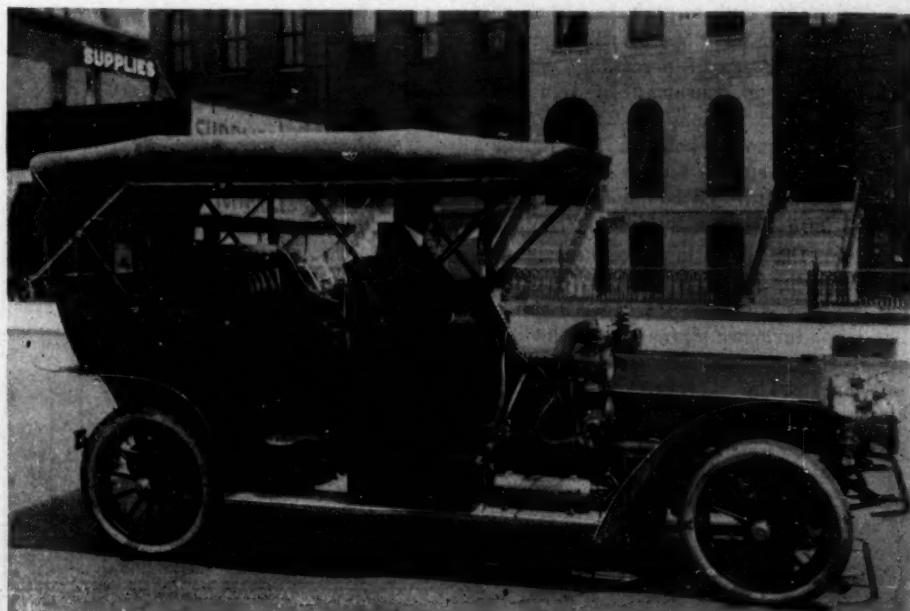
occupy the "off" part, under which will also be a basement. There will be two entrances provided, one on Madison avenue and one on Eleventh street.

G. V. C. Announcement—The announcement is made that the General Vehicle Co., incorporated May 26, 1906, under the laws of the state of New York, has purchased the entire manufacturing plant and patents of the Vehicle Equipment Co. It will continue the business.

Site Wanted—H. G. Moore has resigned his position with the McDuffee Automobile Co., of Chicago, to become sales manager of a new company which will manufacture automobiles. The company is now prepared to entertain propositions from any town which wants to offer a site for the factory.

Up the Steps—It is not often the authorities permit automobilists to climb the steps leading to public buildings, yet no objections were offered recently when F. S. Duesenberg, superintendent of the Mason Motor Car Co., of Des Moines, drove one of the company's light touring cars up the steps to the Iowa state capital building. The car had a two-cylinder opposed motor and weighed 1,750 pounds.

Will Make Wheels—The Eby Mfg. Co., of Omaha, will manufacture the De Jarnette spring automobile wheel, the invention of James F. De Jarnette, for which is claimed 50 per cent more resilience than obtained in an air-filled tire. The hub is suspended in the center of a system of opposing coil springs, which, while the wheel revolves, keeps up a pulling or pushing motion, resulting in a state of equilibrium at the hub. False spokes are used to prevent collapse, sliding in plates fastened to the rim and which touch the rim only when great pressure is brought to bear. For country use steel tires are used, while rubber ones are fitted to wheels designed for city traffic.



APPERSON CAR WITH DOUBLE TONNEAU BODY



NEW FRAAYER-MILLER COMMERCIAL CAR

LMOST a year ago the Oscar Lear Automobile Co., Columbus, O., began designing a commercial truck in which was to be installed one of the company's four-cylinder air-cooled motors, a type in which the cooling of the cylinders by an aluminum air-jacket and blower has attracted much attention. This truck has been completed for several months, but before giving its details to the public the maker considered it best to put the truck through a thorough test, hoping thereby to see if all parts were strong enough for the work intended and if the design was that of a machine best suited for the varied commercial uses of a large city. These ends have apparently been attained. The motor, with its four separately-cast cylinders, has a rating of 24 horsepower, the bore and stroke of each being $4 \frac{1}{16}$ and $5 \frac{1}{8}$ inches, respectively, being the same as used in the four and six-cylinder touring cars. To give a carrying platform 108 inches in length and of any width to suit the buyer, the top of the frame pieces are sufficiently high to permit of cross sills extending over the tops of the wheels at either side. A small percentage only of this platform is consumed by the motor and footboard, which is partly due to housing the motor beneath the driver's seat and placing the blower in the center of the footboard. Although the blower is located here there still remains sufficient room for the operating mechanisms and the driver's feet, as well as room at the left for another passenger. A further step, in space economy, is the placing of the gasoline tank on the dash directly in front of the blower, this and the blower occupying all of the center of the footboard between the dash and the seat and forming a partition, as it were, between the driver and the other passenger.

Transmission from the motor is through an expanding clutch and a four-speed and reverse sliding gear transmission. In this connection there is a difference from the

touring cars in the employment of a jack-shaft and the introduction of side chains to the back wheels, an easier and greater speed reduction being gained by this design. The gearcase is carried back of the clutch and the jackshaft midway between it and the back axle, the result being short side chains. In carrying the jackshaft steel castings for the ball bearing housings are riveted to the under side of the frame channels. Apart from the machinery of the truck strong construction rules. The frame pieces, of channel section, have a 6-inch depth with a 2-inch width and are made straight from end to end, there being a channel subframe for carrying the motor and gearcase. In the spring suspension two platform schemes unite. The forward one comprises side springs 38 inches long and 2 inches wide, with a cross spring 29 by 2 inches, and

in the rear is a similar platform with side springs 38 by $2 \frac{1}{2}$ inches and having eight leaves. The cross part of this platform is 37 by $2 \frac{1}{2}$ inches and has eight leaves. A double stirrup shackling scheme unites the cross and side members of each platform. In both cases the cross springs are at the ends, the forward one to the front and that at the back to the rear. The rear axle is a steel forging, of square section, $2 \frac{1}{4}$ inches to the side and made straight from end to end. The front axle, also a heavy steel forging, is slightly downwardly arched in the center. Wheels in front are 34 inches in diameter and carry $3 \frac{1}{2}$ -inch Firestone tires, but the rear wheels are 36 by 5 inches. The wheelbase measures 100 inches, the tread is 56 inches, the weight empty approximates 3,100 pounds, and the load it is capable of handling is 5,000 pounds. Steering is through a worm and sector gear, with control in a hand wheel on the top of a vertical column. On the wheel are throttle and spark control levers. From the point of accessibility the motor is well located.

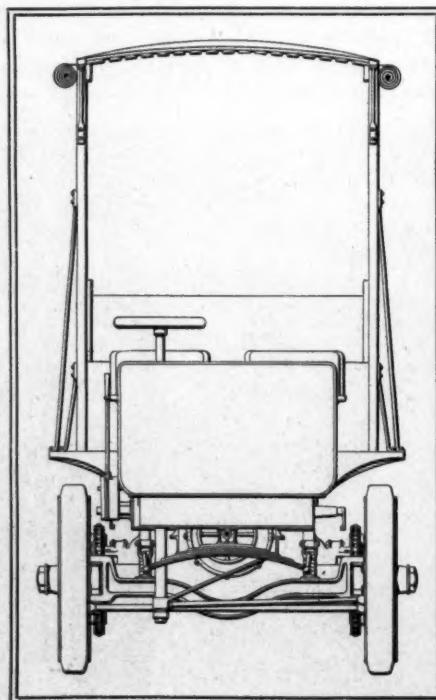
BUS PROBLEM FOR QUAKERS

The recent protest of the Auto Transit Co., of Philadelphia, against the passage of a bill by city councils granting exclusive rights to the People's Vehicle Co. to operate automobile buses over many of the principal streets of the city, has convinced the city fathers that the privileges asked for are too broad. As a result the measure, although favorably reported by the highway committee, to which it had been referred, has been temporarily held up and the chances that it will ultimately be killed unless modified considerably are excellent.

As shown up by the Auto Transit people the new ordinance looks like a grab, for its passage would have given the People's Vehicle Co. a strangle-hold on almost every desirable street in the city, to the exclusion of any other automobile transportation concern which might desire to run vehicles thereon. Fortunately the nigger in the woodpile was desrcied in time, despite the glamor thrown about the measure by the offer to carry school children under 16 years for 3 cents between certain hours. It was this feature, indeed, which made such plain sailing for the bill in the highway committee. Now City Solicitor Kinsey has decided that such a blanket franchise can only be granted by the legislature, and the new company is up in the air, leaving the Auto Transit people a free field. The latter concern promises to begin operations on July 1.

TALK ENGLISH BUS COMBINE

There seems to be a bit of a slump in the English motor bus business at the moment, since not merely have the British had no bus flotation recently, but the public patronage of the London motor buses has been so poor that a combine to pool receipts and squeeze out further competition has been forced to the front, and



FRONT VIEW FRAAYER-MILLER CAR

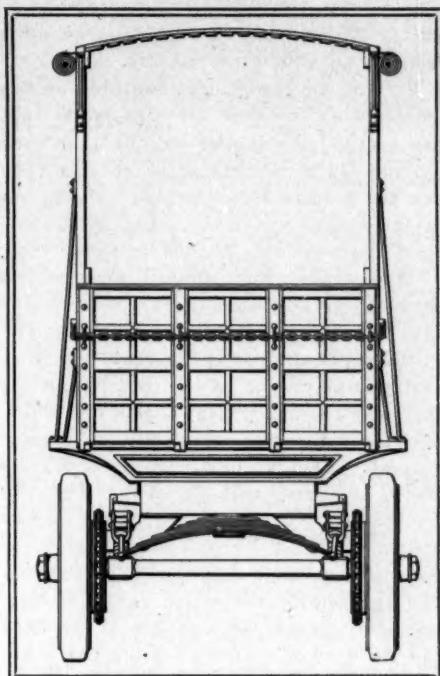
will likely be consummated shortly. Complaints from the London public regarding the noise and shortcomings of the motor bus have become so numerous that police prosecutions have followed and the unfortunate drivers and conductors are being fined on that account, the prosecutions being for "unnecessary noise." But as this unnecessary noise is largely the result of inevitable wear under conditions which have not permitted proper repairs to be made, it is difficult to see how the buses can be kept on the road. Some of them have been 6 months in use and can be heard, even in the din of London traffic, 200 yards away, which would mean an advance intimation in the open country equal to 2 miles.

The noise and ramshackle condition of some of the earlier buses has had its effect in driving the London public onto the horse-driven bus or onto some of the more modern motor buses, which are less noisy and more comfortable. As these buses are sprung so that they ride best with a full load, the unfortunate passenger who goes on one when it is lightly loaded is so slung about by every jolt of the road that he is disinclined to again patronize the motor vehicle, consequently one may see today motor buses running with but comparatively few occupants.

MAIL TEST FOR ORIENT

A series of exhaustive tests with an Orient as a means of rural free delivery is about to be undertaken by the Waltham Mfg. Co. The postoffice department has given its permission to the manufacturers of this car to demonstrate whether or not the Orient can be used successfully in this capacity. The department is advised that one of the cars will be brought to Washington within the next few days and it is the intention of the authorities to try it out on several of the routes in Maryland and Virginia adjacent to Washington. The carriers will be taken over their routes by a representative of the company and they will report the results to Postmaster-General Cortelyou, who is fully alive to the proposition and will watch the test with interest, for he realizes its importance in the work of the rural free delivery department.

The Waltham people were given permission to make a trial with the Orient over routes adjacent to Washington last January, when the roads were in their winter condition. On account of the automobile shows and the great rush of business the company was unable to take advantage of the opportunity at that time. Lately the request for a trial was renewed, to which Fourth Assistant Postmaster-General De Graw replied that the department was willing to grant without a test that the car could do the work all right at this time of the year, and therefore he did not believe a test was necessary. The Waltham people desired, however, to make the trial both now and next winter, and,



BACK VIEW FRAAYER-MILLER CAR

as before stated, they will be given the opportunity. This series of tests will be watched with interest, not only by automobile manufacturers generally, but by government officials, for they will undoubtedly have a far-reaching effect. Some of the rural free delivery routes in Maryland and Virginia are over roads that are nearly impassable in bad weather, while in good weather they are nothing to brag about.

QUAKERS HAVE THE FEVER

At the present rate Philadelphia will be overrun with motor omnibus lines, if all the proposed schemes materialize. Scarcely a week passes without the introduction of an ordinance into councils granting route privileges for such companies. Only recently the People's Vehicle Co. came to the front through an or-

dinance introduced into the common council asking for the privilege of operating electric buses on Broad, Market, Diamond and other streets, Delaware, Hunting Park and other avenues, besides a number of streets and avenues leading to the west park. The ordinance is a comprehensive one, and if acted upon favorably, will interfere with the privileges already granted the Auto Transit Co., which has been granted a franchise to run Imperial electric buses on Broad and Diamond streets. The latter company, indeed, filed an immediate protest against that portion of the ordinance which gives the People's company rights on those two streets. The scheme has the appearance of a "gobble," it being asserted that the franchises for the numerous streets are to be secured and held for sale to future bona fide applicants for similar rights. Speculation is rife as to the possible outcome of so many bus lines. In good seasons, with heavy traffic, all will go well, but when the rainy day comes, with its quota of troubles, the story may change. Philadelphia is, however, motor mad.

ENGLISH EXPERIENCES

As the expansion of motoring in America is certain to bring forward the claims of the motor bus as a public transit vehicle, the experiences gained during the past couple of years in England with regard to gasoline motor bus construction may be of considerable use to the American motor trade. Up to the present there have been two types of motor bus in use abroad—chain-driven and cardanshaft-driven. These again have sub-divisions in the power transmission scheme, upon which really settled convictions as to comparative worth are difficult to obtain, and vary so much that it is evident that none has been wholly satisfactory.

First of all is the chain-driven type which is precisely the same in power plan as the mechanism of an ordinary chain-driven motor car. The cardanshaft-drive,



FRAAYER-MILLER COMMERCIAL CAR LOADED FOR TEST

however, has some variations not found in the pleasure vehicle.

Thus the Milnes-Daimler transmits its power to a propeller-driven countershaft carrying teeth meshing with internally-toothed rings fitted to the inside face of the driving wheels. This type has wooden radius bars, it being held that the natural spring and elasticity of the wood act as a counterpart for the spring-controlled radius rod with which some of the newer types are now fitted. It is worth noting, too, that the expanding metal-to-metal brake, which was first used on this type, is now replaced by a railway hanging link and shoe motion acting on brake drums on the ends of the differential shaft.

In the de Dion, which is another popular type, the transmission gears and differential are placed together, the case being bolted to the frame just in front of the rear axle, so the central line of the differential shafts corresponds approximately with the center of the road wheels, the rear axle being dropped to permit this. To accommodate the relative movement between the road wheels and the gearcase short universal shafts transmit the power from the differential direct to the hubs of the wheels. The cardanshaft in this car from clutch to differential is exceedingly long, and it is held that its comparative flexibility takes up the functions of a spring and so provides a transmission which relieves the gears of considerable shock and jar.

One of the latest of the new designs is the Scott Stirling, a North British production. In this the transmission is also of the cardanshaft type. The steel castings which form the rear axle enclose the bevel driving gear and the differential; the differential shafts pass through the arms of the castings and convey the power direct to the road wheels through flanges keyed on their outer ends, and bolted on the outer face of the hub. The weight of the car is thus carried on the hollow axlecase, the drivingshafts merely taking up the torque stress. This is an adaptation of the very latest and most approved form of what is generally called live axle design to the motor bus.

The fourth of the popular types of car is the Dennis, in which the differential is enclosed with the rear axle. But the principal feature of its construction is the adoption of a cardanshaft worm drive. It is toward this type that men of experience in motor car construction look for future developments of the motor bus, as, when properly constructed, the worm drive is equally efficient with the bevel. When lubrication is properly attended to, it has equal longevity, and in its absence from noise, and loss of power through wear, it stands easily in front of any other type of transmission. Its principal drawback is that its efficiency is lowest at low speeds, consequently it is necessary to run a slow-running engine and use a large reducing gear to maintain efficiency in work such

as the motor bus is called upon to overtake in the course of the day.

Turning to the general features of bus construction it seems more probable that the six-cylinder engine will be that used as soon as a manufacturer of this type can find his hands free enough to bring out a six-cylinder motor bus. But at the moment four-cylinders are the universal type, a two-cylinder bus sining so much in the way of vibration and lack of flexibility that it has been discarded. When the six-cylinder bus arrives speed control will be pretty largely done on the throttle, and in that way the heavy gear repair bill which now faces the bus owner will be greatly reduced. Another point in favor of this is that it permits such simplicity of control for the driver that he is at liberty to give proper attention to the circumstances of the traffic through which he is proceeding. The appreciation of which serves to considerably reduce the dangers of accident and the cost of up-keep for the bus. Another point to be indicated is the tendency while preserving the wheelbase, which is at present at its usual length, to carry the driver's seat over the end, so as to reduce the necessity of the overhang rear axle, which is being found a fruitful cause of skidding and instability when taking sharp turns. The only drawback to this arrangement is that it renders the engines comparatively difficult of access, but as this has put a premium on the production of an engine which requires few adjustments the tendency is in the right direction. The honeycomb type of radiator has gone entirely out for bus work, as it is a delicate fitment and expensive, very sensitive to road shocks and a continuous source of bother once it starts leaking, consequently the tubular type surrounded by an ornamental tank has almost entirely displaced it. Attempts are being made to secure the honeycomb principle by means of flattened horizontal tubes, but how far success has attended this is not known at the moment. In connection with the water system it has been found that rubber connections joining up the various flow pipes have created endless bother by reason of the rubber in the interior of the flexible connection peeling off and clogging the circulating system. Flexible metal tubes are now stipulated in these matters.

Owing to the necessity to obtain as much power as possible out of the engine without increasing its weight, considerable attention is being devoted to the question of a muffler. Silence in the muffler is absolutely imperative under traffic regulations in England, and it is at present secured at the expense of a large amount of back pressure. This it is proposed to prevent by a more scientific construction of a muffler. Experiments are being made towards an exhaust condenser and by cooling the exhaust by means of radiating fans and swift currents of air. There is a proposal to water-cool the exhaust, but up to this none of these has

come into actual practice. In the matter of ignition, all three types are in use, high and low tension magneto and ordinary accumulator, which has its advocates, each of which claim superiority of the type they favor. The general verdict, however, depends on the manner in which each is handled. With proper lubrication the low tension magneto is probably preferable because of its simplicity and reliability, but when the tappets become sooted the trouble by the roadside is considerably greater than in either of the other systems, and the absence as a rule of an alternative ignition is given low tension. Of the other two, the accumulator is the simpler and perhaps more satisfactory. The high tension distributors at present in use seem somewhat incapable of preserving their insulation.

In clutches, although the cone clutch is nearly universal, the disk in some form is certain to supersede it. As at present constructed, and it appears to be likely to remain so, buses are driven to a considerable extent on the clutch and the exhaust. To have a clutch capable of slipping to a large degree without incurring other troubles gives a multiple disk type a decided advantage, besides which they are small and not so heavy. The lubrication of this type, however, is a matter which requires careful supervision and up to the present supervision is just what the motor bus has not been able to secure here. Still, motor bus designers consider that with increased engine power, multiplicity of cylinders, and a disk clutch and throttle control, change speed gears may be practically eliminated, and it is towards this point that they are all endeavoring.

Perhaps the one point in connection with car designs which has been most promptly discarded in bus construction has been the use of ball bearings, not merely in the road wheels but in the gear shafts. Plain bearings are at present the choice. Roller bearings may succeed, but at the present time they are not much in evidence. The ball bearing gear shafts were all right until the bearings, by excessive use, became loose. The balls giving way got into the gearbox and created such havoc that their use is now discountenanced. Perhaps the only point upon which the motor bus designer admits the efficiency of the ball bearing is in the differential thrust.

A complaint is that some of the substantial-looking channel steel frames have broken at the center. This has been variously explained by bad material, weak construction and other causes, but the lesson it teaches is the necessity to properly camber the longitudinal members so as to bring the greatest strain a trifle further forward than is usual. The springing of the motor bus is a vexed problem which has not often caused trouble in London owing to the almost constant loads, but which in other districts has done so. It is very difficult to spring a motor bus so

that it will ride easily when empty and when full. As a rule, designers figure on the heaviest load with the result that when light the buses swing and sway and jump uncomfortably. Experience seems to point to the adoption of volute springs on account of their progressive stiffness, as the inner coils get into work under the heaviest load. At the present time, however, designers have only attempted to adopt two sets of semi-elliptical springs for the rear axle, the second or inner set only coming into play when the bus load passes beyond a certain point. On rough going some form of shock absorber will be necessary, but as all the roads in London are fairly good that point has not begun to force itself yet.

Another point in design is the necessity to make the steering gear more substantial than has been the case. A ball socket connecting rod is very unreliable and in some instances is being substituted by a stirrup with a half-universal joint action. The ball socket sometimes pulled right up after a little wear, and at least one accident has been caused by this. The brake question seems to resolve itself into the adoption of broad-faced band brakes on

driving wheels with facilities for removal which enables them to be readily inspected and the faces renewed with ease. Internal expanding brakes do not find favor, since they are inclined to bite too quickly at times and have cracked the differential before now; still, a good many commercial cars are fitted with them.

Forced feed for gasoline is being discarded in favor of natural gravity, the gasoline tank being placed under the driver's seat and not, as hitherto, at the tail end of the bus. An advantage in this is that a gasoline gauge can be fitted which informs the driver as he goes along of the amount of fuel he has in hand. Lubrication is entirely automatic on the latter types and the endeavor is to secure more positive system with pumps delivering to each part of the engine a quantity entirely governed by the speed of the crankshaft. A point in this regard is that oil conduits are now given larger diameters, since in cold weather they clog and choke. Oil cups, too, are now fitted wherever possible, so in case of any failure of the automatic system hand lubrication can be utilized so as to enable the bus to complete its work. As far as pos-

sible all lubricators are pretty close to the driver's seat, as it is found that when operations are inconvenient they are not given attention.

This brings one to remark that in designing a motor bus, accessibility, detachability and interchangeability are the three cardinal points of successful design leading up to efficient handling, economical upkeep and satisfactory repair. It is probable that in the matter of control some system like the Murray governor, in which the act of withdrawing the clutch throttles the engine, the slowing of the engine automatically retarding the spark, is adopted.

The last item to be considered is the matter of tires. Although very considerable advance has been made in the solid rubber tires, they still remain the most expensive item in the up-keep of the bus. So expensive indeed are they that experiments are being conducted with spring wheels, so as to provide a satisfactory substitute. Up to the present this has not been secured, and in the alternative bus proprietors generally contract to run all their buses at so much per car mile to tire manufacturers. Five cents is considered a satisfactory figure by the bus proprietor.

COMMERCIAL STEPPING STONES

Sure Now—The Simmons Boot & Shoe Co., of Toledo, O., recently installed an Olds motor delivery wagon.

Starts Wheel Factory—The Logan Construction Co., of Chillicothe, O., has opened an automobile wheel department which will turn out wheels without the usual requirement of hub flanges. It will build the wheels true to gauge without flanges, which can be inserted later.

One More—The Central automobile station is to operate a bus line between Springfield, Mass., and Lenox during the season, and has already received a Knox sightseeing car, which will accommodate fourteen passengers.

In Place of Horses—Clarence T. Torrey, who has purchased the Alta Vista hotel, at Corpus Christi, Tex., has established an automobile line to transport his patrons from the railroad station to the hotel, a distance of 3 miles.

Feeder for Car Lines—C. J. Bronson, of Grand Rapids, Mich., has taken the contract to run an automobile service from the terminus of the Fifth avenue street car line and from the Wealthy avenue car barns to the new Fifth Avenue Golf and Athletic Club grounds.

Doctor a Promoter—Dr. Evans is the promoter of a new automobile passenger and baggage line which is to be put into operation in Coffeyville, Kan., in the near future. Five machines have already arrived, and later on this will be increased to eight, having a capacity of seventy per-

sons. One machine will make trips to the ball grounds and will be used as a general sightseeing vehicle, while the others will be run on a regular schedule from all trains and through the principal streets of the city.

Just an Experiment—George Atchison is trying a livery experiment in Mankato, a Minnesota city of 11,000 inhabitants. He has installed a five-passenger gasoline car, operated in connection with his horse livery. If Mankato people encourage the plan, more cars will be purchased.

Oriole Line—The Automobile Outing and Transportation Co., Baltimore, Md., has been incorporated with a capital stock of \$50,000. The company will buy, sell and hire automobiles and automobile supplies. Charles L. F. Harig, R. S. Opio, L. C. Spencer, J. H. Smith, and Addison E. Mullikin are among those interested in the new concern.

Big Order—The largest single order for automobile trucks ever sent in from Pittsburgh was forwarded lately by J. B. Hall, of the Fort Pitt Automobile Co., who sold eight 20-horsepower Oldsmobile gasoline line trucks to Kaufmann Brothers. These trucks have a capacity of 1.5 tons and will be used for general delivery work in the great department store. It is likely that in a short time the firm will entirely abandon the use of horses in its deliveries.

For Homesteaders' Use—The Union Pacific is arranging for an automobile

line to run from Rawlins, Wyo., for 100 miles north to carry homesteaders and others into the Shoshone reservation country. The automobiles will compete with the through passenger trains of the Northwestern and Burlington roads, and it is believed by the railroad people that they will thus be enabled to give faster and more satisfactory service than any of the other roads.

Tickles Toledo—The Toledo Transfer Co., of Toledo, O., has received a Logan light delivery wagon, and has had it installed since the first of the month. The vehicle is driven by a two-cylinder, 10-horsepower engine, weighs 1,250 pounds, and carries a load of 1 ton. The machine is testing out nicely, and is giving good satisfaction. The transfer company contemplates doing all its transfer and delivery service in the near future by means of motor wagons.

Test of Big Trucks—In the test of 2½-ton trucks instituted by the New York school board, which lasted 4 days, on Long Island and Staten Island, the Logan truck performed satisfactorily. The first day it ran through Brooklyn, the Bronx and Manhattan with a full load of 2½ tons of sand bags. The trip was 100 miles, covered in 8 hours 30 minutes, with a perfect score. The second day it carried a load of supplies 100 miles with the loss of only 7 minutes during the day, that being caused by the commutator slipping late. The third day the truck visited twenty-four schools, distributing supplies.

From the Four Winds



MR. AND MRS. WALTER HALE, WHO WILL TOUR EUROPE IN CLEVELAND RUNABOUT

To Feel Public Pulse—The aldermanic ordinance committee of Buffalo has decided to hold a public meeting shortly on the proposed vehicle tax or license fee of \$5 a year for automobiles.

Prince Travels in Style—His highness, the maharajah, gaekwar of Baroda, the multi-millionaire Indian prince, who visited Buffalo last week, proved he was an enthusiastic automobilist. Accompanied by President Gratwaick, of the Buffalo chamber of commerce, and other prominent Buffalonians, the gaekwar and his party toured the city in two Great Arrows. George Coventry drove the prince's car. The prince assured the Pierce people he would sing the praises of the Great Arrow on his return to India.

Chicago Dealers' Plans—The Chicago Automobile Dealers' Association has decided to follow the example of the easterners and have "something doing" in Chicago this summer. Carrying out this policy, it decided at its meeting Monday night to promote a reliability test over the Elgin-Aurora century course some time between July 15 and August 1. Joseph F. Gunther, of the Rambler branch, is in charge of the contest. The association also decided to give the orphans another outing next Tuesday, taking those children who had to stay at home last week. The club has joined in the movement and 100 cars will be needed to care for all the children.

Theatrical Folk on Tour—Walter Hale, leading man with John Drew, and Mrs. Hale, who was the original "Prossy" in "Candida," and author of "A Motor Car Divorce," sailed on the 20th for Gibraltar. They expect to tour from Gibraltar to the North Cape in a 20-horsepower Cleveland runabout, collecting material for magazine articles, and for a new automobile novel. They will go from Gibraltar into Spain, driving first to Cadiz and then to Seville, Cordova and Granada. After a stop in the Alhambra they will go south again to Almeria, and then follow the coast gradually northeast to Alicante, Cartagena, Valencia, Tarragona and Barcelona. They will cross the frontier near Perpignan and go east to the valley of the Rhone, reaching it at Avignon or Marseilles via Nimes, Arles. From there they will follow one of the national routes along the river to

Valence, Lyons, Macon and so into Paris. After a stay there they will drive into the chateau country at Tours and then north to Calais and so into Belgium and to the North sea.

From the Motor King—One of the presents given by King Alfonso of Spain to his bride was a brooch, a copy of the king's automobile, set in diamonds, the top of the tonneau being of rubies, while the door of the car, when opened, discloses a picture of Alfonso himself.

Organize in Utica—President Willett L. Brown, of the Syracuse Automobile Club, and Secretary F. H. Elliott, of the New York State Automobile Association, went to Oswego, N. Y., last week to attend a meeting of Oswego automobilists, who met for the purpose of forming a club at the Deep Rock hotel. Mr. Brown and Mr. Elliott addressed the automobilists and explained the benefits to be derived from such an organization. J. B. McMurrich was chosen temporary president and Norman Bates temporary secretary. The club will start with twenty-five members.

Mayors Will Help—At a meeting last Saturday night at Atlantic City, at which were present the mayors of the five towns through which the proposed new Absecon-Somers Point boulevard on the mainland will pass, assurances were given that each of the towns will do everything in its power to further the scheme. This 12-mile link, which will connect with the meadow boulevard to Atlantic City and also with the new bridge to be built across Great Egg harbor bay, will add vastly to the pleasures of automobiling in and around the pretty seaside resort.

Long Trip—Mr. and Mrs. George M. Huston and son, of Chicago, have arrived at Columbus, O., after completing a trip of 30,000 miles in an automobile. The trip was started from Cleveland May 26, 1905, going first to Columbus, thence through Ohio, Indiana, Illinois, Wisconsin and Iowa, a distance of 6,000 miles. They returned to Columbus and started over their long trip, taking the national road down through West Virginia and Maryland, thence to Philadelphia and Atlantic City. From there they went to New York and then up to Portland, Me., and into Canada, going all through the maritime provinces. Quebec and Toronto

were visited, then a return was made to the states, crossing at Niagara Falls. Then the long trip through the south was taken, the party going by the way of Washington, Norfolk, Va., and down through the Carolinas. Jacksonville was reached and then the return trip was made, stops being made at all the leading cities in the middle southern states.

Loose Rules—Complaint is made by an Englishman that the rules governing the recent Milan gold cup tour in Italy were too loose, in that the speed average was placed too high. It is charged that as there was only one control a day that it was possible for a driver who met with accidents to make up the lost time by tearing through the country at 50 miles an hour. When he reached the night stop he simply hung around the outskirts of the town until he could slip into the control right on the minute allotted him to finish the day's run.

Hub's Charitable Plans—The Boston Automobile Dealers' Association will take over forty of the members of the Perkins' Institute for the Blind for a long ride to their country home at Lake Massapoag on Friday next. The Massachusetts Automobile Club is to observe children's day on June 26 by giving an automobile outing to the children of Boston. Not only have the members offered their cars to make this very laudable undertaking a success, but the dealers of Boston have placed their cars at the service of the club and the automobilists of the city are being appealed to.

Coliseum for Indianapolis—Largely through the efforts of Indianapolis automobile men, one of the most enthusiastic of whom is Mayor Charles A. Bookwalter, that city is at last to get a coliseum. Last week a company with a capital stock of \$300,000 was organized and a site 325 feet by 215 feet has been purchased for the purpose. The big building will seat 15,000 people and incidentally will provide a place where Indianapolis dealers and manufacturers may give an automobile show in keeping with the progress of the industry and the size of the city. Building will be started at once.

White Mountain Tour—The second annual White mountain tour of the Bay State Automobile Association will start July 25 for the visit to the White mountains. The New York Motor Club will cooperate with this organization in this outing. The intention is that the two clubs will leave Boston on July 25, resting at night at Rye Beach and the following day continue to Bretton Woods, stopping at Intervale for the noon meal and rest. On Saturday morning the members will start out on their trip to welcome the Gliddenites. That evening a ball will be given at the Hotel Mt. Washington; on Monday there will be a hill-climbing contest; on Tuesday other automobile contests will be held in a place of easy reach for the visi-

tors to the mountains. The start home will begin on Wednesday, taking in Portland, where a reception and entertainment will be given to the Bay Staters. The outing will be completed on Friday evening of that week.

A. C. A. Alcohol Testers—The Automobile Club of America has appointed Angus Sinclair and John A. Hill as chairmen of committees to promote tests of denatured alcohol as fuel and of commercial motor vehicles.

Motor Cycles After Cup—The international motor cycle race, organized by the French Motorcycle Club, will have this year, as challengers, three Gillet cycles, mounted by Taverneaux, Lalanne and Fauvet, who are going to do their level best to wrest the trophy from the Austrian club. The features of the cycles are as follows: Two cylinders, 3 1/2-inch bore, 3 9/16-inch stroke, giving about 8 horsepower; ribbon strap transmission with special anti-slipping pulley; automatic carburetor; reservoir large enough for 120 miles' run at top speed, which is calculated to be 70 miles on level road. The Austrians will run only one make of mo-

tor cycle, the Puch, and the British eliminating trials have singled out two Matchless machines of 7 horsepower each and one J. A. P. machine of 6 horsepower, as the competitors for the cup.

Hoosiers Sympathetic—There is a movement on in Indianapolis for an orphans' day, such as have been observed in other cities, but a novelty in the Hoosier capital. Just now Cecil Gibson is pushing the project and within a few days letters will be sent to the 650 automobile owners of the city asking them to lend their cars for the occasion. It is planned to give the event some Saturday in July and about 100 automobiles will be needed for the purpose.

Sells Airship—Carl G. Fisher, of Indianapolis, has sold his airship, Comet IV, after a demonstration and delivered it to Richard Kann, president and manager of the Wonderland park, Indianapolis and Milwaukee. The envelope of the machine is 79 feet by 19 feet in diameter, and contains 11,500 cubic feet of hydrogen gas, with a complete lifting power of 540 pounds. The carriage is fitted with a Fisher four-cylinder air-cooled motor, bore

and stroke 3 by 3, developing 12 horsepower at 1,200 revolutions. Fisher is now building two balloons of this same type for amusement companies. The Comet will be on exhibition some time in August at the White City, Chicago.

Long Trip for Clevelanders—F. C. Gates, chairman of the runs and tours committee of the Cleveland Automobile Club, has arranged for the annual Fourth of July long-distance tour of the club. Last year a large party of members drove through eastern New York, while the year before they went around Lake Erie through Canada. This year the run will be to Mt. Clemens, Mich., a popular health resort. The start will be made from Cleveland, Sunday morning, July 1, going to Toledo the first day, where the members will remain over night, starting Monday morning for Mt. Clemens. On Tuesday the party will be in Detroit and Mt. Clemens, and the start for home will be made Wednesday morning, July 4. The party will reach Cleveland Thursday afternoon. The event will be a go-as-you-please affair, the participants meeting only in the evening.

THE READERS' CLEARING HOUSE

ALCOHOL MOTORS

Boston—Editor Motor Age—The price of gasoline here is increasing nearly a cent per gallon per week, and if it continues long it will force some users to give up their cars. I may have overlooked whatever has been printed on the subject of the use of alcohol, but I would like to know whether the alcohol motor is an assured success and what modifications or changes would be required in a four-cylinder motor to permit the use of alcohol.—T. W. S.

Because of the existence of the internal revenue tax on alcohol, the alcohol motor has not been brought to the front in this country, but now that the tax on denatured alcohol has been removed—or will be, beginning January 1, next—there will be considerable experimenting along this line. As a matter of fact, many makers of motors and carburetors are already doing a lot of experimental work and by the time the automobile shows are held next winter important developments will have been made. Alcohol motors have been used successfully abroad, particularly in Germany, where the government has aided in their development in a substantial manner. Automobile motors have been operated by alcohol with ordinary carburetors, but while they will run they are necessarily difficult to start and are not so economical of operation as they would be with especially designed carburetors. Alcohol can be used now if a two-way cock is used, so that the motor can be started on gasoline and when running well and has

become heated somewhat the alcohol can be turned on and the gasoline cut off. Nothing can be done now, however, except to experiment, for denatured alcohol cannot be secured before January 1, next, at any but a prohibitive price.

FAULTY LUBRICATION

Remsen, Ia.—Editor Motor Age—Can you tell me briefly through the medium of the Readers' Clearing House if the dryness of a strip about an inch wide in one cylinder of my motor indicates a leakage past the piston rings? The remainder of the cylinder wall seems to be well lubricated. The water in the radiator boils in 3 to 4 minutes, even at full speed, and I can think of nothing that will cause this except the partial dryness to be found in the cylinder.—Reader.

The dry strip in the cylinder would be more apt to come from a tight-fitting ring at this particular spot than from lack of fit, for if there were a leakage there it would mean the ring did not touch the wall of the cylinder. Turn the rings around and see what effect this will have. The fact that the water in the radiator boils could have nothing to do with ill-fitting rings or dry cylinder walls. The radiator may need cleaning; possibly the water jackets also need attention, for if one is found to be fouled the other is apt to be in the same condition. Motor Age gave instructions in the issue of May 24 for cleansing radiators and water jackets. Look to the pump and ascertain that the pump is performing its functions.

USING KEROSENE

Erie, Pa.—Editor Motor Age—Is it possible for me to use kerosene for fuel without changing the carburetor or motor? I have a two-cylinder opposed motor. I desire to make the change, if possible, to reduce the element of danger, as I have already had a little taste of fire from gasoline and do not care to take any more chances.—Penn.

Kerosene has been used in ordinary carburetors, but not with any degree of success. Where some means are provided to heat the carburetor in order to volatilize the oil, kerosene can be successfully used. If you can arrange some scheme so that hot water, or still better, the hot exhaust, can be piped around the carburetor, kerosene could, after some experimenting, be made to work with more or less success. There would be difficulty in starting on kerosene unless a torch were used to heat the walls of the carburetor. You can put in a two-way cock, however, and have a very small tank of gasoline for starting purposes. When the carburetor becomes heated the cock can be turned, shutting off the gasoline and turning on the kerosene. Before starting the kerosene left in the carburetor would have to be drained off to allow the gasoline to be used. Gasoline would not have to be used for starting after the motor had been running if the car did not stand so long as to permit the carburetor to cool thoroughly. Motor Age will be pleased to hear the results of any experiments that are made, both with kerosene and alcohol.

STORIES of the GARAGE



It was 1 o'clock in the morning, with a card game going on in the chauffeurs' room, and mixed in with the terms of the game was an intermittent discussion of garage management and its relation to the chauffeurs and the bosses—owners of the cars. In this particular garage there were no colored slips of any color going into "the boss" once a month, with a report of every arrival and departure of the cars, and it was a part of the discussion, and wholly the truth, if, as a consequence or not, there was a garage in the city so free from night hawking as the one where the game was going on. It was also freely commented on that the chauffeurs' room was open 24 hours out of the 24, and that nothing was said even though a chauffeur should, now and then, forget to go home and bunked in the tonneau until morning. The latter situation—of open chauffeurs' room at all hours—came up, because one of those present had just taken his car away from an adjoining garage run on very systematic lines—including reports, locking up the chauffeurs' room at midnight, no camping out, etc.—and brought it over to the garage under discussion.

Just as the talk had given way to the more serious question before the house—an interesting jackpot—a roar and a rumble that suggested Vesuvius and San Francisco in one, brought all to their feet, with a rush following to the garage proper. The sight that greeted them was a sheet of flame, seen through adjacent windows, in the adjoining garage. In just 7 minutes by the clock every one of the fifty cars were lined up out in the street and a guard established at each end of the line. When the cars were finally put back in the garage and account of stock was taken there wasn't missing a robe, a lamp or the slightest part of the polish on any car. But what of the garage with its gilt-edged system of reports and lights out at midnight? As a consequence of its stringent rules not a chauffeur was on hand, only the three men making up the night gang of washers and polishers. Not a car was saved; the night gang took to its Sengambian heels and practically all of the forty-odd cars were totally destroyed.

It is not the least point in the tale that one of the cars to suffer most was a new \$4,000 affair that only a week before had been shifted from the all-night to the midnight place because monthly reports were not sent in. During the haggling with the insurance company and while

paying a premium to secure an immediate delivery of another car of the same make, the owner said to his chauffeur: "Well, Sam, if I had not been so particular to know that you weren't using a dollar's worth of gasoline nights I might have saved this \$600 premium"—paid to get the new car.

Big as was the catastrophe, it was not without its ludicrous side. When the various owners got their morning papers and read of the big fire and then hurried to see how things really were, an ex-political big-wig found his 4-year-old rattle trap buried under a \$10,000 car that had fallen through from the floor above. He immediately started in cussing the manager for the burial, when all that was left of it from the effects of the fire was a mass of junk.

* * *

Chauffeurs are sometimes given to drawing the long bow in a mutual boasting match of things they have done under force of poor circumstances. Whether or not the following is a stretch of the imagination is left to the judgment of the reader. Among others Lin had just told of an instance when the night before he had returned from Coney Island and left his owner and companion at the club. In going up Broadway about 2 o'clock in the morning he found he couldn't control his throttle. Jumping out he discovered that a small cotter pin was missing from a rod end. Without another cotter pin or even a piece of wire, Lin, who is somewhat of a Chesterfield, doffed his cap to the first passing woman and begged a hairpin, taking her name as a slight return for courtesies rendered. The bit of wire easily did the trick.

Then Jack came out strong with the following: "Talk about emergency thinks. I was touring up the country last summer with the boss and his family and

one day had 150 miles to make through a hilly section. About half way of the distance my motor refused to take the hills in its usual manner—poor compression from two leaky valves. When I looked for my powdered glass I found the kid of the family had dumped it out to use the box to keep an all-day sucker in. While I was scratching my head and swearing at the kid it came to me that there was a drinking glass under the seat. Remembering how my wife broke up ice for making ice cream at home I put that glass in my cap and powdered it fine with a rock and then used it to grind in my valves."

* * *

The other day a transient drove into the garage with a four-cylinder car that, with tonneau body, scored a certain well known record last season, the essential part of which was a big non-engine stop mileage. The car was bought by a young collegian and turned into a speedy run-about. He drove it 250 miles to have one of the cylinders overhauled. This was attended to and sent back to the transient garage for his calling to drive home. It came into the garage on Saturday night in fine shape, running perfectly. Sunday morning the owner turned up for his 250-mile return trip and cranked until he was blue in the face, with about four weak kicks as the other result, and otherwise spent nearly three-fourths of an hour trying to get the motor to run. Calling in the trouble man of the garage, who was assured by the owner that the ignition had been tested and found all right, and who, anyway, believes that more trouble comes in starting from carburetors than from ignition, the latter injected gasoline through the pet cocks of the cylinders. After swinging her for a dozen full turns with only one faint explosion, he started for the plugs, in the face of reiterated assurances from the owner that the ignition was all right, only to find that the porcelains in all four plugs were broken. This was undoubtedly an extreme case, but it shows that there are short cuts to success, even in seeming great gasoline motor mysteries. Not over 5 minutes was used in starting the motor with the four replaced plugs in position, after the trouble was located.



Current Automobile Patents

Gramm's Muffler—No. 823,115, dated Dec. 8; to Benjamin A. Gramm, Chillicothe, O.—In this muffler there are inlet and outlet compartments, the former being approximately double the size of the latter. Each compartment has an end piece and the concentric cylindrical shells in the compartments end at the partition separating the two compartments. The outer shell of each compartment is imperforate and the other shells perforated. The separating partition has apertures around its outer edge between the walls of the outer and the next to the outer shells. The exhaust gases enter the tube A, pass through the holes B into C, thence pass through the tube D into E, thence into F in the smaller compartment and return to the center tube G through a reverse route and then into atmosphere.

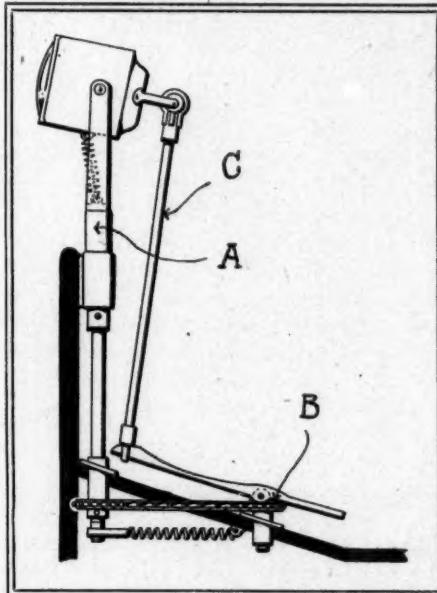
Headlight Controller—No. 823,163, dated Sept. 9; to Jacob S. Detrick, Baltimore, Md.—This inventor has designed a search-light bracket whereby a light may be raised or lowered or swung from one side to the other through the medium of the foot. The lamp is supported on a pivotal stand A secured to the floor board of the car, the lamp proper being hinged in the usual manner. A foot bracket B is connected by a vertical rod C to the back of the lamp to command the raising and lowering, while the foot bracket, being also pivoted, permits the lamp being swung around in either direction.

Peculiar Connecting-rod—No. 815,069, dated March 13; to James F. Cook, Cambridge, Ill.—This connecting rod for a gasoline engine has the connecting rod cap hinged at one side and a cap for the wrist pin hinged at the opposite side. Both caps are held closed by a long bolt which crosses the connecting rod as one arm in the letter X. Through one bolt both the piston bearing and crank pin bearing can be adjusted.

Double Motor Plant, No. 810,869, dated January 23; to J. B. King, Plymouth, Eng.—This invention refers to the combined motor and gear changing scheme. Two two-cylinder vertical motors are located so that their crankshafts are in line and connected by a differential gear. On one crankshaft are two spur gears which mesh with other gears on a countershaft without the crankcase. These spur gears on the countershaft drive is by chain to the rear differential, and from either end of the countershaft, drive is by chain to the rear wheels. Arrangements are made whereby either one of the spur gears on the countershaft can be locked to the shaft

through friction clutches, the device providing two direct speeds.

Carbureter Novelty—No. 817,641, dated April 10; to C. B. Harris, Wilmington, Del.—This carbureter is of the separate float feed class and has the mixing chamber in the form of a horizontal tube at the side of the float chamber. The gasoline enters the float chamber through a spraying nozzle rising at 45 degrees to the axis of the tube and terminating above the center of the chamber. A deflecting vane projects from the top of the mixing chamber at the windward side of the



DETTRICK'S HEADLIGHT CONTROLLER

nozzle, so that the entering air does not hit upon the nozzle but is deflected to the bottom of the mixing tube and so sucks up any gasoline that flows out.

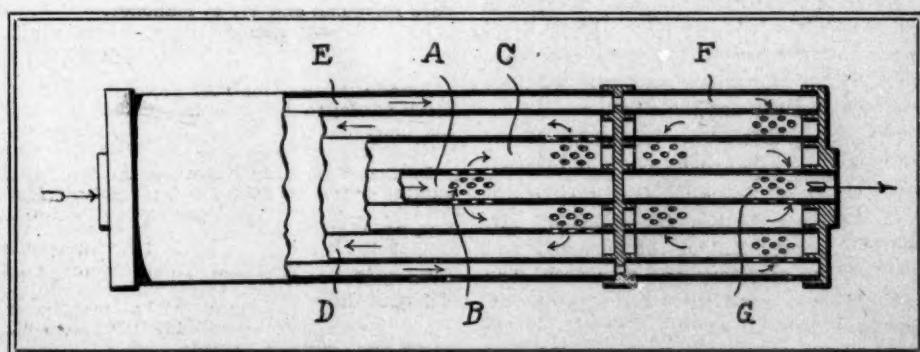
Internal Combustion Motor—No. 820,712, dated May 15; to H. G. Giffard, London, England—The inventor's motor, of the vertical cylinder type, has connections with two separate receptacles, each of

which contain chemical substances capable of oxidization and reduction. A casing surrounds these compartments and into this casing is conducted the heated exhaust from the cylinders. Both receptacles, previously mentioned, are provided with air alternately and other arrangements for letting the gases pass out of them alternately.

Dry Cell—No. 820,047, dated May 8; to C. H. Hirlmann, Fort Lee, N. J.—A zinc cup forms the outer casing or jar; within it is an absorbent material; in the center of the cell is the carbon rod made with a hole in its center and radial slots out of this hole. Surrounding the carbon and between it and the absorbent is sawdust, which enters the slot in the carbon and into the center, permitting the active agents having a larger surface of the carbon to work upon, the apparent object of the invention being the increasing of the cell capacity without increasing its size or weight.

Front Wheel Drive—No. 817,258, dated April 10; to G. A. Littmann, Charlottesville, Germany—The inventor's automobile drives through the two front wheels. The rear wheels are used for steering. The front wheels are of large diameter, more than double that of the back wheels. The driver sits on a seat high above this axle, which gives the vehicle the same side appearance as a horse-drawn cab with the cabman mounted high in front and the occupants low in the rear. The motor is of the vertical type and is mounted crosswise in front, a little to the rear of the axle, and is suitably geared to the axle. Steering is by a hand wheel and the general motor control is similar to that employed in motor cars.

Cape Top Attachment—No. 817,517, dated April 10; to W. C. Rands, Detroit, Mich.—The invention relates to plates to be attached to the sides of the seat part of automobile bodies, so sockets can be attached for supporting the bows of the top. These plates are intended to be substitutes for the iron work generally needed on the seats of motor cars for the carrying of the tops. The plates are suitably secured in position and are made to fit closely to the body lines. In each plate is a socket and a bracket is made to engage in the socket. This bracket has seats in it for the several bows of the top.



SECTION OF MUFFLER INVENTED BY B. A. GRAMM

BRIEF BUSINESS ANNOUNCEMENTS

Buffalo—R. P. Yates has purchased an interest in the O. K. Machine Works.

Romeo, Mich.—The corner stone of the factory of the Detroit Auto Vehicle Co. was laid on June 11.

Brooklyn—The Bender-Martin company, engaged in the automobile business, has filed a petition in bankruptcy.

Pittsburg—The Colonial Auto Co., agent for the Cleveland and Finch cars, will soon take possession of its new garage at Walnut and Ivy streets.

New York—A. L. Kull has announced that the capital stock of the New York branch of the Wayne company, for which cars he is the agent, has been increased from \$25,000 to \$50,000.

Portland, Me.—Jewell Dowling has just completed one of the finest garages in the state. Mr. Dowling, who is the agent for the Pierce Arrow and Studebaker cars, has added the Columbia to his line.

Philadelphia—Savery, Scheetz & Savery have completed the plans for the erection of the new garage for the Rambler company at 207-09 North Broad street. It is to be a brick building, three stories in height, and to measure 40 by 100 feet.

Newark, N. J.—The Motor Vehicle Co. has been appointed agent for the Aerocar for Union, Essex, Somerset and several other of the northern counties. Agencies have also been opened in Bridgeport, New Haven, Poughkeepsie, Peekskill and Jersey City.

Pontiac, Mich.—A subscription of \$200,000 has been raised here to secure the establishment of an automobile factory. It is a well established concern, which at present employs 250 men, but on its removal here the force will be increased to at least 500.

Washington, D. C.—The Cook & Stoddard Co., of 1028 Connecticut avenue, is putting in a special electrical charging apparatus. The company is the agent for the Franklin, White, Locomobile and Baker Electric, as well as the Cadillac commercial wagon.

Indianapolis—Frank A. Beck has opened an agency for the Pope-Toledo at 719 North Illinois street. Another agency just established is one for the Wayne, which has been taken by the Gibson Automobile Co. The latter company has also taken the agency for the Premier.

Waukesha, Wis.—The Waukesha Motor Co. has been organized here and incorporated by A. T. Stebbins, Harry L. Horning and Fred Ahrens for \$25,000. Mr. Stebbins is president of the company and Mr. Horning secretary and treasurer. The company has leased the large stone building on North street opposite the water works plant, formerly occupied by Edward Foster as a wool warehouse, and will man-

ufacture automobile engines and conduct a garage and repair shop.

Lawrence, Mass.—A. J. Wills, of 514 Essex street, has taken the local agency for the Crawford.

Haverhill, Mass.—Seavey Brothers, of 50 Emerson street, have been appointed agents for the Lambert.

Boston—The Burmester Rubber Co. has opened an attractive store opposite the Motor Mart at the corner of Church and Tennyson streets.

Swampscott, Mass.—A commodious garage has just been opened at 44 Humphrey street. It will be known as the King's Beach garage. The owner is H. M. Jacobs and the repair department will be in charge of E. L. Brown.

Detroit, Mich.—The Clark estate has sold a plot of ground containing 3½ acres to the Blomstrom Motor Co. The ground adjoins the present factory of the company on Clark avenue, and will be used for an enlargement of the plant.

Allentown, Pa.—R. C. Clapp, of New Haven, Conn., the president of the Diamond Automobile Co., visited Portland last week with the view of locating an automobile factory there. He looked over the power plant on the Paulis Kills and the lands where it is proposed to locate various manufacturing plants. The Diamond automobile plant will employ 300 men at the start, increasing this within 2 or 3 years to from 600 to 800. At first its daily output will be four vehicles per day,

RECENT INCORPORATIONS

Rochester, N. Y.—Long & Mann, capital stock \$15,000; to manufacture appliances for the adjustment of tires on automobiles; incorporators, A. S. Mann, A. A. Long, Abram Mann and Carrie A. Long.

Minneapolis—Motor Service Co., capital stock \$12,000; incorporators, F. L. Loomis, B. G. Baker, C. L. Stacy and W. W. Baker.

Jersey City, N. J.—Vandergrift Automobile Co., capital stock \$200,000; to manufacture automobiles, motor carriages, trucks, etc.; incorporators, H. G. Morris, Pedro C. Salom and F. Rogers Donahue.

Bloomfield, N. J.—Eagle Auto Supply Co., capital stock \$500; to deal in automobile supplies; incorporators, J. G. Batzle, Jr., Isadore Raymond and W. F. Mahoney.

New York—United Auto Co., capital stock \$25,000; incorporators, L. Ephraim, H. Ephraim and Isaac Katzer.

Albany, N. Y.—John A. Secor Co., capital stock \$5,000; to manufacture motors, engines, machinery, etc.; incorporators, F. E. Keith, Arthur Kennedy and John A. Secor.

Boston—Standard Steam Automobile Co., capital stock \$40,000; to manufacture and deal in motor carriages; incorporators, George Watson, H. H. Fuller and L. M. Campbell.

Buffalo, N. Y.—Shaw-Brown Motor Co., capital stock \$15,000; to manufacture automobiles, motor vehicles and motor boats; incorporators, William Hoddick, Charles E. Shaw and Garnet C. Brown.

Detroit—Detroit Auto Sight Seeing Co., capital stock \$15,000.

but later on this will reach fifteen or twenty, it is expected.

Pittsburg—The Pope Motor Car Co. will now be represented here by the Auto-Repair Co.

Philadelphia—Thomas L. Drew is now connected with the sales department of the White Steam Car Co.

Marinette, Wis.—E. D. Fitzpatrick returned Tuesday from Chicago. While there he secured the agency for the Rambler for this section.

Springfield, Mass.—The Fisk garage has opened a new fireproof building at 36 Essex street. Among other improvements it has a gas engine manufacturing plant, as well as a repair shop.

Cleveland—Contracts have been awarded for an automobile repair shop to be built for T. E. Brooks in the rear of the Brooks building, on Euclid avenue. It is to be a one-story building, 40 by 75 feet.

Flint, Mich.—The new factory building of the Weston-Mott company, in Oak Park, is almost completed. This company, which was located in Utica, N. Y., for a number of years, will move here about the middle of July.

Terre Haute, Ind.—The Terre Haute Brewing Co. is said to be planning an extensive motor commercial vehicle service to be installed within the next few months. An order has been placed for two gasoline vehicles.

New York—It is announced that it has been mutually agreed between the Darracq and Serpollet companies, of France, to form a new company with a capital stock of \$25,000, to engage in the manufacture of steam omnibuses.

New York—Notice has been filed that on July 10 the Decauville Automobile Co., of New York, will apply for authority to change its name to Wyckoff, Church & Partridge. This company is the agent for the English Daimler, C. G. V., Franklin and Babcock.

Milwaukee, Wis.—J. W. Carhart, well known through the state as the builder of the first steam automobile, has invented a tire to be made of paper, which, he claims, is a great improvement on the rubber tire, inasmuch as it is cheaper, more durable, does not puncture, requires no pumping and never goes flat.

Tacoma, Wash.—By the end of the month the Acme Garage Co., under the management of Harry Hurley, will occupy quarters at 1210-16 Tacoma avenue that are specially constructed for the automobile business. A lease has been secured of the four ground stores of the Miller-Pratt building now in the course of construction. The company will have the largest floor space of any automobile concern in the city, 75 by 100 feet.

American Motor League

OFFICIAL BULLETIN

National Headquarters, Vanderbilt Building
New York

NARRAGANSETT BAY REGION

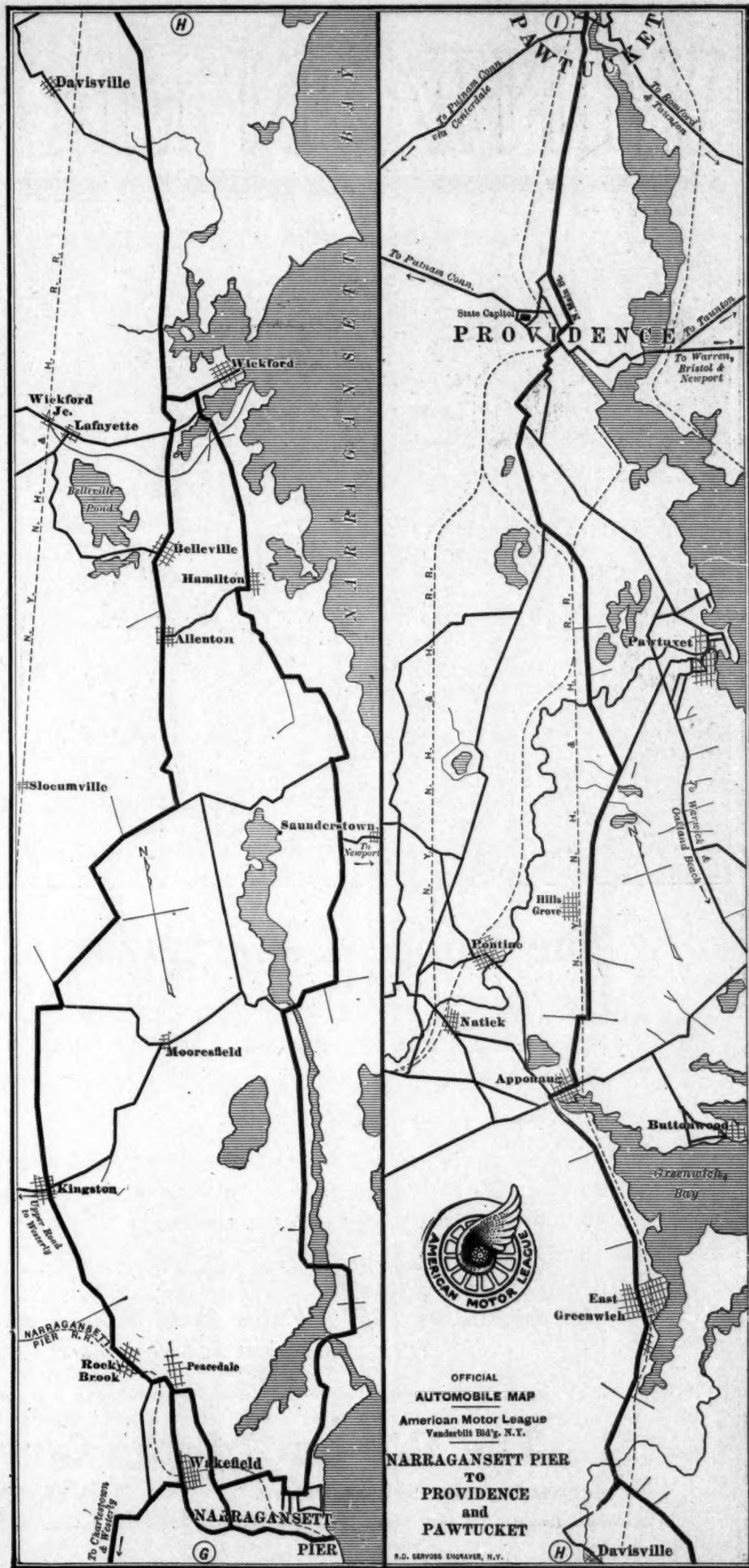
The fourth section of the shore route to Boston is shown this week and covers the run from Narragansett Pier to Providence and Pawtucket. The heavy lines indicate the best routes; lighter lines show important connections. From Kingston there is an "upper road" running eastward and joining the shore road at Westerly. Members wishing to run over to Newport may take the ferry at Saunderstown. From Wickford north the trolley lines supply an easy guide for most of the distance and short spurs are shown on the map wherever there is a branch road which might lead the tourist astray. These maps can be easily followed. They are made from the official government maps and will be printed in both card form and in the official road books of the A. M. L. Each member will receive a free copy of the book covering the section in which he resides. Each card map will contain, on the reverse side, a printed description of the routes shown by the map. Criticism is invited, and any suggestion by which this work can be in any way corrected or improved will be gladly received.

MAPS UNDER WAY

From day to day the league is busily compiling and arranging the most popular routes running out from all important cities and towns. Each section will be abundantly taken care of, and as fast as route information is checked, compared and verified it is handed to a skilled draughtsman and put into the form of a map. If the reader is an enthusiast here is the chance for him to direct his energy in useful channels. Let him send to the secretary a map of his home town, and the surrounding country, with the best roads plainly marked in red; other roads, if used by automobilists, in black. Add a few lines of description, giving distances, best hotels, garages and a mention of interesting points to visit.

"HOW TO DESCRIBE A ROUTE"

A brief circular with the above title will be sent for the asking. Also printed matter describing the A. M. L. and its objects. Address American Motor League, Vanderbilt building, New York city.



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